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CLINICAL LECTURES

ON CASES OF

DISEASES OF THE NERVOUS SYSTEM;

DELIVERED AT KING'S COLLEGE HOSPITAL

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BY

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LECTURE I.

We have had very lately so many interesting cases of diseases of the nervous system, several of which still remain in the hospital, that I am anxious to avail myself of the opportunity of calling your attention to them in the present and few following lectures, in a more particular manner than I can venture to do at the patient's bedside.

It has been frequently remarked by medical men how often cases of a similar kind occur together, and this is abundantly exemplified in the number of cases of nervous affections which have lately been, and are still under my care in this hospital. You have had the opportunity of studying three cases of chorea of great interest, and one of them of great rarity; one case of hysterical affection of the diaphragm, exhibiting some very curious phenomena; a very interesting case of paraplegia arising from softening of the spinal cord, with which you may contrast one, apparently unconnected with organic change; a very well-marked example of paralysis of the fifth pair of nerves; a case of cerebral disease producing symptoms similar to those which may proceed from spinal cord disease, and also that rare phenomenon, palsy of the portio dura on both sides of the face. We must also add to our list two other cases of disease of the brain, giving rise to very well marked symptoms; and, doubtless, before we shall have concluded our review of these cases, others of not inferior interest will present themselves.

I shall first beg your attention to the

Cases of Chorea.

This is a very common disease, especially among the children of the poor. The frequency of its occurrence ought to urge you to study it carefully, that you may form right notions respecting its pathology and treatment. It is a disease chiefly of early life, being rarely, if ever, met with beyond twenty years of age, unless it be of a very chronic kind, and have commenced at a period antecedent to that age. Of the three patients whom we have lately had under observation, one was thirteen years of age, the other was sixteen, and the third nineteen. It occurs more frequently in females than in males.

The disease is characterised by irregular movements, of an emotional kind, affecting all those parts which are most liable to be influenced by emotion,—the eyes, the face, the muscles of the trunk, and of the extremities.

If we reflect on the changes which are excited when a person receives a sudden start, we shall perceive that they resemble, in a great degree, a momentary paroxysm of chorea. There is more or less sudden catching movement of the limbs, especially the upper ones; the expression of the eyes and of the whole countenance is indicative of surprise and alarm; the voice clings to the mouth, and articulation is impeded; and in extreme instances the voluntary movements are irregularly or imperfectly performed. Sometimes the lower extremities are so disturbed in their action, that the person is in danger of losing his balance, and finds it difficult to maintain his position.

And when we observe the phenomena of an extreme case of chorea, we cannot fail to notice that the same parts are affected. We find irregular, jactitating movements of the arms, the eyes are moving wildly and without harmony, the muscles of the face are in incessant action, causing the strangest and most various grimaces, the trunk is tossed about here and there, and sometimes with so much violence that the patient is in danger of striking some part of his body against the bed-post or the wall, if near him, and it is with difficulty that he is prevented from falling out of the bed. The lower extremities participate in the general excitement, and follow the movements of the trunk. Articulation is nearly or altogether de-

stroyed; deglutition is difficult; when the patient is told to put out his tongue he thrusts it out with violence, and retracts it with equal rapidity, appearing to watch his opportunity to do so without subjecting it to be bitten by the continual motion of the lower jaw.

This form of chorea, which I shall designate

General Chorea,

is not of frequent occurrence, and fortunately it is not so, for so violent and incessant are the movements, that unless they can be quickly arrested the patient must wear himself out. It demands a prompt and energetic treatment on the part of the practitioner, who ought to be prepared to meet such cases occasionally.

I shall illustrate this form of chorea by narrating to you the following, which we have lately had under treatment.

Case.—Sarah Sleet, ætat. 15, was admitted on the 14th April. She is a servant, and has always lived at Battersea; general health good. She has never had symptoms of hysteria nor of nervousness. Is very passionate when provoked, but is generally good tempered and uniform in her spirits. Menstruated for the first time four months ago, and has been regular every month since that time. Her last menstrual period was a week ago; the discharge has ceased.

On the 29th of March she had a severe fall, and doubled her left hand under her, and was in consequence much hurt and greatly frightened; she, however, soon appeared to forget it. On the evening of the following day, while she was at supper, her mother noticed that "her eyes worked," and that there was an unusual movement of her lips as she spoke.

She slept well, but in the middle of the following day (31st), she was obliged to leave her work on account of violent and irregular movements of her hands and arms. She was free from pain; made a large quantity of very light-coloured urine; her bowels were open.

During the succeeding day her body became affected, and in walking she inclined her trunk towards the left side; the movements were constant through the day, but she slept quietly during the night.

On the 2nd the movements were more violent; her legs now became engaged, and she passed a very disturbed night. On the morning of her admission her deglutition became affected.

On her admission she was immediately put to bed. Her body and arms were in a state of almost constant agitation, the head being rolled from side to side, and the trunk twisted about in all directions. The muscles of the legs are also affected, but the legs themselves are less frequently moved than the other parts of the body. The face and eyes are but slightly engaged, and the tongue is protruded almost naturally. Voice firm, articulation distinct. The two sides of the body are affected to an equal extent, although not simultaneously. Pupils natural. Pulse 120; respiration somewhat accelerated; tongue clean. The elbows and wrists are rather red from friction. Chest cannot be auscultated.

Ten o'clock, p.m. Slept soundly and quietly during the day twice, for half an hour each time. The movements cease completely during sleep, but return with considerable violence immediately she awakes.

April 5. Passed a bad night, having procured sleep only for three quarters of an hour. Morphia had been freely administered, but without any influence on the movements. The movements continue with great violence; there is great difficulty in protruding the tongue. The face and eyes are now very much affected. When her attention is directed to any object she opens her eyes very widely, and strives to fix the eye-balls, which, however, quickly resume their wandering movements. Articulation has now become very difficult; lips are covered with a slimy saliva; sounds of the heart natural.

Half-past seven, p.m. Has had some sleep, but awoke in a fit of uncommon violence, rearing her body up in bed, contorting her limbs, and uttering a low cry; she foamed at the mouth, and complained of its feeling sore. In attempting to swallow she seized the vessel with her teeth and gulped the liquid like a patient with hydrophobia. She has become very irritable.

The whole manner of the patient, at this time, bore a striking resemblance to that of a person labouring under hydrophobia.

Cold water splashed in her face seemed to quiet her, and it was now resolved to place her in a tepid bath and pour cold water on her head from a hand shower-bath. Whilst the water was falling she writhed about with extreme violence, but afterwards she became quiet, fell asleep, and slept for half an hour.

The bath was repeated two hours later in the night. She struggled violently in the bath, but slept for half an hour after she came out of it; she awoke, however, in the same condition, her temper being excessively irritable. At two, p.m., she again fell asleep, and slept for an hour and a half; then awoke for half an hour, and again slept for an hour.

Finding that opiates did no good, but rather confused the intellect, I abandoned the use of them after the first day, and determined to follow out a tonic and stimulant plan to the fullest extent. From the beginning she had meat and half a pint of porter twice a day; and two grains of sulphate of quinine, with three grains of sulphate of iron, every four hours. After the third or fourth dose this medicine created

sickness; but, unchemical though it was, the addition of four minims of dilute hydrocyanic acid enabled the stomach to bear it.

On the 5th, the quinine and iron were administered *every hour*, and she had an allowance of six ounces of wine. Her appetite was good, and she always ate and drank heartily.

On the 6th she appeared much better; the movements were less violent, and appeared to affect chiefly the arms and the muscles of the face and neck. The difficulty of protruding her tongue remains, and her articulation is still much impaired; voice rather shrill; deglutition improved; much less irritability; passes urine in large quantity. The same treatment was pursued; but the baths were not repeated lest they might occasion too much excitement.

April 8. She has slept, at intervals, throughout the night. At one time she had an uninterrupted sleep of two hours. To-day the movements are almost confined to the arms and to the mouth. She can feed herself. Articulation firm and distinct; tongue protruded with less force; pulse tranquil; surface natural. Much redness of shoulders, elbows, hands, wrists, and hips, from the continual friction.

From a calculation made to-day it appeared that she had taken, in ninety-six hours, at least, of sulphate of iron, 195 grains; sulphate of quinine, 130 grains; dilute hydrocyanic acid (P. L.), 252 minims; without any unpleasant effect after that the vomiting, which came on in the beginning, had been allayed.

From this time our patient improved rapidly; the movements diminished in violence; she got sleep; her countenance became much more natural. On the 10th she was able to get up. A considerable *abruptness* and unsteadiness is still manifest in the voluntary movements of the arm and trunk. The left hand is very weak, and there is some jerking movement of the left arm. Tonics less frequently administered.

The symptoms which appeared to linger most were weakness of the left arm and hand, with occasional choreal movements in them, and also a want of perfect command over the tongue, which was protruded with abruptness, being grasped by the teeth as if to keep it steady and to guide it.

On the 21st the following report was made: she can now sit and work quite well; she has had no movements since the 18th, and feels better in every respect. She was discharged soon afterwards; she has visited the hospital occasionally since her discharge, and continues in excellent health.

That this form of chorea (which may well be termed *general*, as all the muscles, excepting the involuntary ones and those more exclusively devoted to respiration, were affected) is of rare occurrence is proved by the fact that although we have many examples of chorea in this hospital, this case has been the second only of this violent kind in the last three years. Dr. Bright, in his valuable reports, mentions only three cases which can be fairly regarded as of this kind, and Dr. Graves, in his "Clinical Medicine," relates a case very similar to that which we have witnessed, and which appears to have been the only one of the same degree of violence he had witnessed at that time. It is this form of the disease which generally proves fatal, and in such cases the death must be the result of exhaustion.

General chorea, however, frequently occurs in a milder form. The same sets of muscles are engaged, but with considerably less violence. I will read to you the particulars of such a case from my case-book:—

John Payne, ætat. nine, was admitted Nov. 11, 1841. He had one attack of chorea before his admission, of which he got well. His present attack began with a cold; while he was suffering from this he had a fall, which occasioned a considerable bruise on his sacrum. Almost immediately afterwards the movements of chorea came on.

This boy was unable to keep any but the recumbent posture; as he lay on his back he was continually flexing and extending his limbs, and moving his head and trunk from side to side with a writhing movement, at the same time incessantly making grimaces; he could grasp sufficiently well with both hands, but could not maintain his grasp; when asked to put out his tongue he thrust it out with violence. Eyes large and prominent, but free from convulsive movements; heart's action natural. This boy got well quickly under tonic treatment preceded by purgatives.

Partial Chorea.

By far the most common form of chorea, and that, with which we are all so familiar, is the partial form. An interesting feature which is very obvious in this form, and of great importance in a pathological point of view, is its tendency to affect one side of the body. One arm, one leg, one side of the face, will exhibit the peculiar movements, the corresponding parts of the other side being free, or comparatively little affected.

Indeed, this hemiplegic tendency belongs to all the forms of chorea, although, for obvious reasons, to the partial form in a more marked manner. And in the instance of general chorea which lately came under our observation, the movements were never of equal intensity on both sides at the same time, but seemed to shift alternately from one side to the other, so that at one time the right side was chiefly moved and at another the left. The varieties of partial chorea are very numerous. Sometimes the eyes only are affected; their play is not harmonious, and squinting is the result; a form of squinting, by the way, which no one

should attempt to treat by operation; or some of the other features are affected, the nasal or labial muscles being excited to motion, or the orbicular muscles of the eyelids, or the occipito-frontalis muscle. There is a good example of this facial chorea in a woman at present in Lonsdale ward: the morbid action apparently began very early in life, and now has become constant from habit. In her, as it frequently is in others, it is associated with very imperfect articulation; the power of the tongue is greatly deranged, and the mode of its protrusion is peculiar and quite characteristic. The patient thrusts out the tongue with force, holding it between the teeth, apparently to direct it and keep it steady, and retracts it with equal rapidity.

This partial form of chorea may become habitual, and it may be that in many of those persons who exhibit peculiar movements of particular parts, that which the force of habit has perpetuated, it may have begun as a morbid derangement of the motor power of particular nerves, or may have continued as a remnant of a more general affection; indeed, what is called *the fidgets* may be often traced to some temporary derangement of digestion, giving rise to a disturbance of the nervous centres, analogous to that which occasions chorea; and many fidgetty persons, of whom every one must know several among his acquaintance, might perhaps trace the source of their habit to such an impairment of function of the nervous centre, which, had it gone a little further, would have produced confirmed chorea.

A very remarkable feature of this disease, which equally exists in all its forms, whatever their extent or severity, is the complete cessation of all disordered motion during sleep. This you saw strikingly exemplified in the case of Sarah Sleet; how perfectly still and quiet she became during sleep, and how quickly the movements returned with all their violence when she was aroused from her repose. This fact ought to suggest a principle of treatment, namely, to procure *natural sleep*; but the sleep which is caused by narcotics is not of the kind to do permanent good. The sedative and tonic influence of cold may here be employed with advantage, and we can scarcely doubt that tranquil and strengthening sleep was promoted in our patient, Sleet, by even the limited use of the shower-bath which we had recourse to in her case.

The following case now in the hospital illustrates many points in the history of partial chorea:—

Case.—Anne E. Lowe, ætat. 19, admitted April 29, employed as a book-folder; has generally enjoyed good health, but has been subject to attacks of cynanche tonsillaris. She is a pale, thin, delicate-looking girl. She never had chorea before.

The present attack appears to have been brought on by a fright she received some five or six weeks ago. She was walking to church on Sunday, the 19th of March, when a person (whom she miscalled a gentleman) followed her, spoke to her, and caught hold of her; she contrived, however, to get away from him, and then went to the house of a relative, where she fell into hysterics, but soon recovered. The following morning, on rising, she found herself unable to speak, and the left arm and leg were affected with involuntary movements; the following morning her speech returned, but she was unable to articulate distinctly for some days afterwards. The movements of the limbs, however, continued unabated, and, on account of them, she was induced to apply for admission here.

On her admission the left arm and leg were affected with involuntary jerkings which she could not control, and which were always increased by any voluntary movement. There was no numbness, nor derangement of sensation in the parts, but she was unable to grasp with the left hand. In walking, the left lower extremity became affected to a great degree with the involuntary jerkings, which rendered her gait very unsteady and insecure. The face was not affected; but the harmonious movements of the eyes were much impaired, so that she squinted greatly, now with one eye and again with the other, and frequently with both. She has, to a slight extent, the peculiar abrupt movement of the tongue in protruding it, and this imperfect power over that organ impairs her articulation in some degree. She reads with an effort, and occasionally she cannot pronounce a word clearly and distinctly.

Under the use of tonic treatment and shower-baths this girl has improved greatly. The first improvement was noticed in her eyes. The squinting gradually disappeared, as the harmonious movements of the eyeballs were restored. The jerking movements of the left arm and leg have now completely ceased, but there remains a considerable weakness of them, especially of the arm, for which she remains under treatment. The involuntary movements always ceased during sleep.

This case illustrates extremely well the

Hemiplegic Character of the Partial Form of Chorea,

and in the altered movements of the eyes and the imperfect articulation, so quickly following a severe fright, the emotional nature of the affection is evidently denoted. The imperfect paralysis which remains is an interesting exemplification of the loss of power which may ensue upon a state of undue excitement; both are the results of what would be called *functional* change, of a state which leaves behind it no traces of such morbid alteration as may be appreci-

able by our ordinary modes of observation; yet in which, no doubt, molecular changes have occurred sufficient to interfere with the physiological action of the nerves, until the long continuance of a healthy nutrition shall have restored the particles, both in quantity and quality, to their natural condition.

Let me conclude this lecture by calling your attention to some points in the history of chorea which deserve special attention in reference to correct views of its pathology.

The subjects of this disease are very liable to relapses until they have reached a certain age, say from fifteen to twenty. Most of the cases which occur here are instances of second or third attacks. This fact denotes that a certain state of constitution is favourable to the recurrence of the attacks, and the liability to that recurrence being within certain limits of age, shows that beyond those limits the constitution undergoes such a change as renders it unfavourable to the development of the disease.

It has not, as yet, been clearly made out that this disease is hereditary, but of this there can be no doubt, that it runs in families—brothers and sisters are liable to it; an additional fact in support of the opinion that a particular state of constitution is favourable to its development.

In almost all the cases that come under our notice the peculiar phenomena of the disease are accompanied by a more or less deranged state of general nutrition. This is denoted by pallor, languor, a soft flabby state of the textures, muscular debility, deranged appetite, and depraved secretions. It has long attracted attention, that children affected with chorea are apt to have worms, and it is not unlikely that the irritation occasioned by the presence of these creatures in the intestine may be the immediate exciting cause of the morbid movements. And it should be observed that there is no more certain indication of imperfect nutrition and depraved secretions than the presence of worms in the alimentary canal. The connection of this disease with rheumatism is not the least interesting feature in its history. It often occurs in the rheumatic diathesis, as I believe is indicated by the frequent coexistence of chronic valvular disease of the heart with it; and it frequently comes on after attacks of rheumatic fever. In the case of a lad of fourteen, who was in the hospital two years ago, the first attack of chorea came on four months after one of rheumatic fever; a year after this he had a second attack of chorea; some time afterwards he had another attack of rheumatic fever, and in three months another one of chorea. The records of practical medicine contain abundant evidence to warrant the assertion that *the rheumatic state of constitution is favourable to the development of chorea.*

We must, however, distinguish between the true chorea occurring in rheumatic habits, and those chorea-like movements which have lately attracted the attention of physicians, as symptomatic of disease of the pericardium or heart. There latter are examples of reflex movement, excited by the stimulus of irritation conveyed from the heart to the nervous centre, and thence reflected to the muscles of the extremities and the face, causing in the latter a peculiar sardonic expression, which to the practised eye is very characteristic of pericardial irritation.

In my next lecture I shall call your attention to the pathology and treatment of chorea.

ANATOMY OF THE GANGLIONIC NERVES.

The researches of Volkmann and Bidder have confirmed—what, indeed, the march of science had previously caused to be little doubted by physiologists—that the ganglionic or sympathetic is not a mere offset from the cerebro-spinal nervous system, but an independent system of itself. The above anatomists have, by the aid of the microscope, verified a great difference in the arrangement of the nervous fibrillæ in the two systems. The fibrillæ of the sympathetic nerves are distinguished from those of the spinal cord, by being paler, thinner, and containing less granular matter. Collected in bundles they have a greyish-yellow tinge. Where they communicate with the spinal nerves, the fibrils of each system of nerves may be distinctly traced by the aid of the microscope. Those of the sympathatic system are seen not only to penetrate to the centre of the spinal nerves, but to spread themselves around the circumference of the latter, where, by a careful measurement, the greater number are found to be distributed. If the sympathetic nerves originated from those of the spinal cord, say Volkmann and Bidder, we ought to find fibrils belonging to them in the roots of the spinal nerves. Now, if these roots be examined, scarcely one *sympathetic* among fifty medullary fibrils will be found; though they ought in such a case to be met with there in greatest number. The sympathetic nerves in reality originate in the ganglia; but not only the ganglia of the sympathetic cord, but those also on the posterior branches of the spinal nerves. These latter ganglia especially give origin to the sympathetic filaments destined to unite with the posterior ramifications of the spinal nerves, a fact which gives probability to the hypothesis of Weber respecting the use of the spinal ganglia.—*Froriep's Notizen*, xxxi., 20.

ON

STRANGULATED HERNIA;

WITH PROPOSALS FOR

ALTERATIONS IN ITS TREATMENT.

BY

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NOTWITHSTANDING the attention which has been given to the subject of strangulated hernia, an attention that has been proportionate to the frequency and dangerous character of the disease, our knowledge of it still remains very imperfect and unsatisfactory. The anatomy of the parts concerned is now, indeed, well understood, and the operation of removing the constriction on the intestine by the knife is, consequently, well performed; but surgeons, in their unwearied study of this part of the subject, appear to have neglected other modes of treatment which often render this dangerous expedient unnecessary; and to have forgotten that the being obliged to have recourse to operations of such hazardous character, can rarely be considered but as a proof of the imperfection of their art.

In taking a contrary view of this subject, the surgeon has been encouraged by the opinion of the public; for much more credit is usually obtained by the successful result of an "operation" for hernia, than from repeated success in the more difficult and in every respect higher task of reducing the protruded parts by milder and safer measures.

These remarks are by no means intended to imply a low estimate of the anatomical researches to which surgeons have so sedulously applied in connection with the subject of hernia. More precision has undoubtedly thereby been given to the operation and more confidence to the well-informed operator; but still, this was not the quarter where improvement was chiefly required. Mr. Pott, writing in 1750, and long before the anatomical researches referred to were instituted, states that of the many persons on whom he had performed the operation for strangulated hernia, "he did not recollect having lost one whose death could fairly be ascribed to the operation." Yet Mr. Pott, although in the work from which the above quotation is taken he speaks rather contemptuously of what he terms the "*seria nuga* of microscopical anatomy," was fully sensible of the necessity of anatomical knowledge for the successful practice of surgery.

That more attention was due to the other remedies for strangulated rupture than to the operation of cutting the stricture, will appear from a brief allusion to the singular diversity and contradiction of opinion that has existed respecting the character of the principal of these.

The replacement of the protruded parts by the hand has generally been deemed the principal remedy, and the first to be employed; but Richter, Callisen, and Desault were averse to its employment, as causing inflammation, and delayed having recourse to it until the severity of the symptoms, or, in other words, the strangulation, was removed by other means.*

Cold applications to the tumour have, for upwards of a century, been deemed by most surgeons a remedy of much power; yet Sharp (and a higher authority in practical surgery can scarcely be adduced) declared they had a dangerous tendency, and that the cures attributed to them were really owing to other circumstances.

Bleeding, to great extent and repeatedly, was pronounced by Pott to be as much required in strangulated hernia as in pneumonia. Wilmer, Alanson, and Sir Astley Cooper (in many cases) disapproved of it.

Tobacco injections were recommended by Heister to be invariably had recourse to, as being, in his opinion, only inferior to the "operation" in efficacy. A later authority, Sir Charles Bell, deemed them not only useless but highly dangerous; and Pott, in his work referred to above, speaks of them as being nugatory.

Purgatives were much esteemed as a remedy of hernia by the elder Monro and Sharp. By more modern surgeons they are only mentioned to be condemned.

These references will suffice as a corroboration of the opinion which I have advanced. But it is not only that disputes exist respecting the safety and value of these measures; even of those which are generally approved the *modus operandi* is yet so imperfectly known as, from consequent imperfection in their application, seriously to interfere with their efficacy.

* Similar objections to the taxis have been made by later writers. Mr. Gahagan, formerly surgeon of the Dublin Dispensary, has just had the kindness to show me an interesting tract which he published in 1811, advocating the same views. And a surgeon of this town, whose public medical charge of the classes amongst whom the disease more frequently occurs, has given him the opportunity of witnessing a considerable number of cases of rupture informs me that he has, on the recommendation of Mr. Gahagan, adopted the practice in question in several instances and with success. If the above celebrated continental writers have carried their objections to this measure to a faulty extreme, the error probably arose from their not discriminating the various purposes which the taxis is capable of accomplishing, and the corresponding differences of manipulation required.

My purpose in adverting to the above discrepancies and contradictions is not to satirize surgery for its uncertainty, but to show its comparatively very imperfect state as regards the subject before us, and as an argument for the necessity of renewed application to this. Besides, so great a diversity amongst eminent men may dispose the reader to receive more favourably the suggestions respecting the treatment of hernia, contained in the sequel of this paper.

Although the measures which have been adopted for the cure of strangulated hernia are very numerous, no attempt, so far as I am aware, has been made to classify them; and, indeed, the uncertainty which exists as to the mode in which several of them operate (their *modus operandi* being the best basis of a classification) may be a sufficient apology for the omission. Yet, however imperfect such an arrangement of the remedies of hernia might be, it would not only assist in their recollection, but, what is of more importance, tend to point out, in the treatment of the disease, a proper combination of those which are appropriate to each particular case, instead of employing them, as now too often happens, one after the other, in a fixed empirical routine, as they successively fail, by their single unassisted virtue, in affording relief. If the united effect of several should prove of no avail, there would still be this great advantage in combining them, that the time spent in their trial would be comparatively short, and the strangulated parts would, therefore, be exposed to less danger by delay in having recourse to the knife.

Before, however, I attempt thus to arrange the remedies of strangulated enterocele, I shall offer a few observations on some of its causes, which still require explanation.

If the intestine be pushed violently out of the cavity of the abdomen, the ring through which it passes is either dilated by the pressure forcing the intestine through it as a wedge, or the intestine is squeezed through it, the ring remaining of its original size. In either case, or where both the ring is dilated and the intestine squeezed, the constriction follows immediately on the protrusion. These are the most dangerous cases, and the most obstinate under the action of the milder and safer remedies.

In other cases the intestine has already been protruded through a ring or aperture of greater diameter than its own, in its empty and healthy condition. When the fæcal contents of the bowel descend into it from the action of the gut between the hernia and stomach, if the upper part of the gut, as it passes through or into the ring, becomes distended with these, while the lower part passing out of the ring is empty, this lower part is pressed against the ring, and an obstruction is thereby immediately caused to the downward passage of the fæces; but this obstruction is rarely of long continuance. The upper intestine passing the ring soon becomes empty by its contents being pushed either onwards or backwards, and a passage is thus opened for the fæces by the lower intestine. It will occasionally happen, however, that from the continuance of the propulsive action of the gut in the abdomen, the upper part passing the ring continues distended, and consequently the lower part continues to be pressed against the ring and obstructed until injury is produced. This injury may be various. The loop of intestine in the sac may become congested or inflamed from the obstruction, and thus have its propelling power diminished or destroyed; and at other times, becoming much swelled from this congestion or inflammation, constriction may continue at the ring after the intestinal contents in the upper portion of the gut have receded. These are less dangerous cases than the former, as admitting more readily of relief from the less hazardous remedies.

The length of intestine protruded in the latter class of cases may be increased from the following cause, and another source of constriction be thus brought into operation:—The fæcal contents in the protruded portion being forced against the contracted part of its lower extremity at the ring, the effect will often be that a portion of the lower part of the gut in the abdomen will be drawn into the sac (from a cause that will be better understood as we proceed), and may continue to be so drawn through until a more bulky part reaches the aperture, sufficient to produce obstruction, independently of the other causes assigned. Where the sac is not quite filled by the intestine, or is of an yielding nature, this effect is, of course, more likely to happen than under the opposite conditions.

Strangulated enterocele may be considered as the protrusion of a portion of the intestine from a large vessel or cavity (the abdomen) into a smaller vessel (the hernial sac), from which it is prevented returning by a constriction at the aperture connecting the two vessels. In the large cavity the intestine is subjected to considerable but varying pressure; in the smaller one, under usual circumstances, there is little or no such pressure. The membranous ring forming the aperture is dilatable, or may be stretched in various degrees, and occasionally, it is probable, may be retained in its contracted state by spasm. And as the portion of gut in the smaller cavity or sac has its functions disturbed, and is generally thrown into a state of inflammation by the constriction upon it at the orifice of the sac, the worst consequences proceed from a continuance of this state.

Now, the indications of cure under the above circumstances would be—

1. To diminish the bulk of the protruded

part. When so diminished, although the ring may remain in the same state, the constriction may be removed; but by the diminution of bulk the parts are, moreover, rendered capable of passing through the ring, which is effected either by retraction from the action of the intestine within the abdomen, or by the intestine being pushed through it. The bulk of the part or parts may be diminished by having the congested blood squeezed out of them, or, in the case of the intestine, its gaseous and other contents.

2. To widen the ring or lessen its resistance to dilating means. This may be done by (*a*) dilating or stretching it, or (*b*) by cutting it, or (*c*) by removing spasm, and producing general relaxation.

3. To dispose the cavity of the abdomen for the return of the protruded parts, by (*a*) removing the contents of the intestine in the abdomen, or (*b*) diminishing the resistance from its boundaries.

4. To reduce the protruded part, either by (*a*) pushing it through the ring into the abdomen, or (*b*) by causing it to be drawn from the interior out of the sac.

Of the two modes of fulfilling this indication, the first has been a great deal too much confided in, and the second, of late years especially, a great deal too much neglected. The reduction of the protruded part by the efforts of the intestine within the abdomen, is the plan of cure adopted by the conservative principle, the "vis medicatrix," of nature. The bowels are quickly thrown into a high state of action by the strangulation, the tendency of which is to withdraw the strangulated portion from the sac; and if the surgeon were to limit his endeavours to diminishing the bulk of the hernial contents and disposing the ring to relax, nature left to herself would generally effect all that remained to be done. Many cures of strangulated hernia have been thus performed by unassisted nature. The suddenness with which the intestine will often pass through the ring when the constriction is removed, is sufficient proof of the retracting power within the abdomen.

5. To obviate or remove inflammation and other bad consequences of the constriction before and after this has ceased.

To fulfil these indications the following are the principal means now employed:—

1. The most important, and that first employed, is the reduction of the contents of hernia by the hand, an operation termed "the taxis." It fulfils, more or less perfectly, the indications 1; 2, *a*; 4, *a* and *b*; 5.

The mere reference to most of these indications is sufficient; with respect to others a few words of explanation are necessary. The taxis is calculated to fulfil the indication 4 *b*, by the stimulus from the squeezing and kneading of the prolapsed intestine being extended to its continuation in the abdomen and thus exciting its peristaltic motion. The indication 5 is fulfilled by the squeezing out of the acrid fæcal contents freeing the gut from that distention and irritation which might cause or increase inflammation.

The taxis would thus appear to be a very complicated operation, and, from this complexity not having been generally understood, much mischief has arisen, as a difference of manipulation is required for the accomplishment of most of the objects enumerated. Had the term taxis been dismissed from the surgeon's vocabulary, and the indications it fulfils been expressed separately, many of the objections that have been at various times made to it would not have applied. The first and most important indication of diminishing the bulk of the hernial tumour is well fulfilled, even after the first stage of the disease, by a continued and uniform pressure of the hands. The fulfilment of three of the others would be hazardous when the disease has existed for some time, and inflammatory symptoms have appeared.

Amongst the various manœuvres commonly used in the taxis, experience has shown the advantage of turning the hernial tumour at intervals from side to side, but, so far as I know, no explanation has been given why this should prove useful. I believe the reason is, that the channel for the passage of the fæcal contents may be thus freed from an increase of obstruction which has been occasioned by the contortions of the gut, and brought more on a line with its continuation within the abdomen. I advert to this expedient particularly with reference to a suggestion in the subsequent part of the paper.

One curious effect of pressure applied to the hernial tumour has not, I believe, hitherto been noticed. To those who, with Sir Astley Cooper, have supposed that the great if not sole object of the taxis is to push the intestine through the ring, the assertion will appear not a little paradoxical that it must frequently happen, when the protruded intestine is distended, that the pressure instead of pushing it out of the sac into the abdomen will, on the contrary, draw a fresh portion of the gut from the abdomen into the sac. This arises from the same cause mentioned above, which occasionally produces an increase of the hernial tumour. The contents of the protruded intestine on being urged towards the ring or mouth of the sac bulge or press out each end of the loop as it gets contracted towards the stricture or ring, and thus draw out a fresh portion of the gut. Nor is this effect to be considered as injurious. The constriction is thereby removed from a part already perhaps hurt by its long continuance; and by the spreading of the gas and other fæcal contents of the intestine over a larger space, the irritating distention

of it is removed, as well as other benefits obtained from the lessening of this distention, which will be afterwards noticed.

It has, indeed, been recommended to pull the intestine a little way further out of the ring previously to the attempt at reduction, whether by the taxis or after opening the sac.*

2. Blood-letting. Indications 2, *c*; 3; 5. This measure, when carried to a considerable extent, has generally been considered of much efficacy; but it is obvious that in aged or weakly subjects large and repeated bleedings can never, in this or any other disease, be made without some hazard. Syncope, or an approach to it, might be produced in such cases with safety, and probably as effectually, by drawing the blood to the surface and into the limbs by means of the large cupping-glasses or cases that have been employed for this purpose.

3. The warm bath. The same indications are probably fulfilled by this remedy as by blood-letting. Although its general effect is powerful and salutary, its local effect may be injurious, by rarefying the air with which the strangulated gut is so often distended; hence poultices and fomentations are no longer employed in hernia.

4. The continued application of cold to the tumour. Indications 1; 2, *c*; 5. Sir Astley Cooper, whose opinions respecting the *modus operandi* of the taxis and of cold form a singular contrast to the excellence of his observations upon other parts of the subject of hernia, deemed the action of cold to be useful by reducing the sensibility of the parts, and by constringing the scrotum, and thus exerting a useful pressure on the parts. He pronounced the idea that it could be useful by reducing the volume of the air distending the gut an absurdity, and for two reasons,—first (he says), because it has not the effect of doing this; and, secondly, because if it had it would be of no service. It might be asserted with as much truth that the mercury in a thermometer is not contracted by the application of cold, and that the bulb of a thermometer can pass through as narrow an opening as its tube.

5. Injection of tobacco. Indications 2, *c*; 3; 4, *b*. Powerful as this means may be, it cannot be denied that it must be classed with the "operation," amongst the more hazardous remedies of strangulated hernia.

6. Purgatives and purgative enemata. Indications, 3; 4, *b*.

7. Antispasmodics. Indications, 2, *c*; 5. Opium and the other antipasmodics are now seldom used in strangulated hernia, but it has been lately asserted by certain French writers that much benefit has accrued from rubbing belladonna on the tumour, and from applying both this and opium to the urethra by means of a bougie. That this method of treatment may prove of service I think is very probable, although I would ascribe the benefit not to the absorption of the medicines by the mucous surface, but to the general relaxation and fainting that is so often produced by passing instruments into the urethra. Whether syncope is produced in this manner, or by bleeding, or by the warm bath, or by extensive dry-cupping, the effects must be similar, although the causes of it differ exceedingly in respect to safety and facility of application. And I have often thought that this very common effect of passing instruments along the urethra might be applied with advantage in other cases in which syncope from large bleedings is usually recommended.

Another recent French practice in hernia is the application of large cupping-glasses *near* the tumour, to withdraw the intestine from the sac into the abdomen; and *over* the tumour, to draw a further portion of the intestine into the sac. It is improbable that either of these indications, more especially the first, can be so fulfilled, although dry-cupping in the vicinity of the hernia might be useful in various ways, on the principle of counter-irritation.*

8. When the greater number of the remedies already-mentioned have been used

* That this manœuvre has been so little practised cannot excite surprise. It appears at first sight so very strange a proceeding to endeavour to replace the protruded entrails by pulling them farther out, that a fuller exposition of the plan was required to recommend it; and to prevent the reader from exclaiming in the words of the satirist,—

"If merely to get in, Sir, they go out,
The way they take is strangely round about,"

Mr. Benjamin Bell, in cautioning the reader of his "System of Surgery" against using force in the manœuvre, suits his word to this seemingly contradictory action. "But," says he, "when upon trial this cannot be done with great ease it should never be attempted."

* This powerful means of revulsion, formerly so much in use and so deserving of the confidence placed in it, is at present too often neglected on account of the trouble and supposed difficulty of applying it. But the apparatus and slight-of-hand dexterity of a professed cupper are not always required. A common beer-glass will answer for the above and similar purposes. The air within it may be rarefied without possibility of failure by setting on fire a little spirits of wine dropped upon a dossil of lint or cotton, or bit of blotting-paper, previously fixed to the bottom of the glass with wax; and the glass may be covered with thin paper wet (in order that it may yield to the distention) and having in its centre an aperture much smaller than the mouth of the glass. Amongst the various modes that have been adopted for extracting the air from cupping-glasses I am not aware that

without success in relieving the symptoms of strangulation, recourse is had to the operation of cutting the stricture or band of fibres which prevents the return of the protruded parts. This is done either by opening the sac and, after searching for the stricture, dividing this and the constricted part of the sac at the same time, or by dividing the supposed stricture alone outside the sac. The first is a very simple operation, requiring little more anatomical knowledge than that of the appearance of the sac and the parts contained in it, and little more surgical skill than caution in dissecting down to the hernia. It is likewise, of course, a very certain way of removing the constriction from the hernial contents, and of exposing their condition to the view of the surgeon. But with all these advantages it is decidedly a more hazardous operation than the latter, when this is skilfully performed and is effectual in removing the stricture. The circumstances of the particular case, and the degree of skill of the operator undertaking its management, must often determine which plan is the most eligible.

From the classification and *modus operandi* of the remedies of strangulated hernia, I proceed to propose certain improvements of plans of treatment already in use, and another remedial measure on a principle different from any hitherto applied.

We have seen that long-continued pressure of the hernial tumour and the application of cold to it, are amongst the most powerful, and, at the same time, the safest measures, we possess for the removal of its strangulation. But neither can these measures, singly, be perfectly applied in the modes hitherto adopted, nor can they, in such modes, be used in combination. If, notwithstanding, they are often successful when separately used, even in their present imperfect state, how much more frequently would they be so were they perfect and combined.

Before, however, proceeding to a description of the mode of accomplishing this, it will be proper to state, a little more fully than has hitherto been done, what must be the effects of these measures in combination upon the hernial tumour.

The continued application of cold and pressure must often diminish the bulk of the protruded parts by reducing the volume of the gas with which the intestine is distended. In consequence of this diminution of bulk, the opposition is lessened to the retraction of the protruded bowel within the abdomen by the excited peristaltic action of the intestines, because the friction between the ring and both ends of the strangulated fold is lessened. Many other beneficial effects are to be added to this, most of which have already been adverted to, viz., the check to inflammatory action from the sedative operation of long continued cold; its antispasmodic effect; the diminution of the bulk of the tumour by the expulsion of its contents; the relief to the irritable, and perhaps inflamed, gut by the contraction of the volume of its contents, or their expulsion; the support, both preventive and curative of congestion and inflammation, which continued uniform pressure must afford to the protruded bowel; and the restoration, in consequence of the removal of this morbid condition, of its muscular or peristaltic action.

The means of perfecting the application of cold and pressure, and of combining their agency, may be accomplished,—first, as respects the pressure, by placing a bladder of water upon the hernial tumour under such circumstances as that an uniform pressure (to be regulated by the depth of the water) shall be exerted on every part of its surface; and secondly, as respects the cold, by producing a current of very cold water through the bladder by means of two tubes, one conveying the water to the bladder from a reservoir above, and the other conveying it away from the bladder to a receiving vessel at a somewhat lower elevation.

The bladder must be confined to the hernial tumour by a metallic or wooden case in the form of a basin (a small flower-pot would answer tolerably well) of considerably smaller diameter than its own, and having an opening in the centre for the passage of the current tubes. Before this case is lowered upon the surface of the abdomen, care must be taken that the hernial tumour shall be placed in the best position for the evacuation of the contents of the intestine, and that it shall be imbedded in, and surrounded by, the loose bladder; and the position of the tumour should be altered from time to time during the action of the remedies. The case for the bladder must be kept close to the surface of the body by a degree of pressure just sufficient to resist the distention of the bladder, and this, again, may be done by a bandage, or the truss, perhaps, which the patient has been using. Where the surface is irregular to which the case has to be applied, the distended bladder may be prevented escaping at any point by pushing out from beyond the margin of the case a number of strong flat wires, pre-

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it has as yet been suggested to produce a vacuum by the fall of a column of fluid, as the Toricellian vacuum is produced in the barometer. Of course the vacuum need not be rendered complete. In the application of the large cupping-vessels, alluded to above, where it is of importance that the rarefaction of the air should be sudden, such a mode might be used with advantage. The application might be made in an upper bed-room, and the warm water filling the cupping-vessels be allowed to escape by a long tube reaching to a reservoir at the bottom of the house.

viously placed closely together and tied round its outer surface; or its diameter and the line of its margin may be altered by plaster of Paris.

The metallic tubes forming the current apparatus may have their ends fixed together by sealing-wax, or be soldered into a short bit of larger tube, upon which the neck of a pig's bladder may be tied; and if they are tied together for the space of a few inches above their junction, their separation will be still further prevented. Many details respecting the action of this apparatus may be learned by a reference to my paper "On the Local Application of Heat and Cold," in THE LANCET for the 25th of June last. It is only necessary to mention here that the degree of pressure of water on the tumour will be regulated by the raising or lowering the tubes of the current apparatus.

Other means might be contrived to effect the purpose of that described, but none, perhaps, so simple or so easily managed. A deep cylindrical vessel might be used, having a loose membranous bottom, supported and confined to the tumour, as in the former plan, and ice may be thrown into it at intervals. Although such a vessel need not be of the same diameter throughout, it would be necessary to support it over the abdomen, as a microscope is supported by its stand.

I have stated in the paper referred to, why a current of water is, in most of its medical uses, preferable to the application of ice; and even its power of reducing temperature may be superior, just as the exposure of a heated substance to wind more quickly cools it than exposure in a still atmosphere of lower temperature.

Were it desired to make this fluid pressure greater at one part than another, it might easily be done by altering the position of the body, or by using the pressure of a little mercury as well as water. The late Mr. Earle proposed making pressure on hernia by a bladder containing mercury; but without applying the principle of causing the pressure to be exerted on every point of the surface of the tumour, little or no advantage could be expected from such a measure.

This conjoined agency of pressure and cold may be had recourse to in simultaneous combination with several of the other remedies usually employed, even (singular as it may at first appear) with the warm bath, the greater pressure of the cold keeping off the warm water, and thus preventing its injurious local effect formerly noticed. But I have already adverted to the extraordinary neglect that has generally obtained of the principle of simultaneous combination in the application of these means, and to the advantage of classifying them, as an illustration of their compatibility. Had the safer kind of measures been more frequently used in combination, there would have been less occasion to have recourse to those which, from their own action, put the patient's life in danger.

In a case of strangulated omental hernia, in which I lately recommended the combination of cold and pressure, the taxis had been repeatedly tried, and during longer periods than is usual. The hot bath had been also used for upwards of an hour but all without avail. On the contrary, the tenderness and irritation of the parts were increased by these measures. Under the action of cold and a pressure of about eighteen inches column of water, the pain and sickness were soon mitigated, and although complete reduction did not take place for some days, no symptom of strangulation continued after the first twenty-four hours.

The combined effect of these two powerful measures would probably quickly diminish, and accomplish the reduction of many of what are called "irreducible herniæ." The means introduced by Arnaud, and at present employed for their cure, are generally too tedious in their action to be persisted in, and many persons are, consequently, condemned, on their abandonment, to pass through life burdened with a great and dangerous inconvenience; for, with this affection, the patient is in constant jeopardy, unless he lives as an invalid, and remains constantly on his guard against such muscular exertions and accidents as would convert his irreducible into a strangulated hernia. The extraordinary cures related as having been performed on the principle of Arnaud's treatment, of cases which, from the size and long duration of the tumour, most surgeons would have deemed incurable, upon the supposition of the existence of extensive and strong adhesion between the hernial contents and neighbouring parts, ought to encourage us to make new attempts at the alleviation of this common and distressing form of rupture.

I do not anticipate the objection to such a plan as that which I have been proposing, that it requires more skill, and would be more troublesome in the application than the usual methods. No conscientious surgeon would offer such an objection. But in cases where there might be a difficulty of procuring even so simple an apparatus as that described, the practitioner might still advantageously combine cold and pressure by compressing the hernial tumour, as equally as possible, by some folds of sheet-lead, and placing a bladder of ice over it. A more perfect means constructed upon this principle, combining elasticity as well as the power of applying pressure to an unequal surface, and which might be termed an artificial hand, would be a tolerable substitute for the equable and uniform pressure of the fluid.

(To be concluded.)

ON THE

TREATMENT OF THE VARIOUS SPECIES OF FEVER.*

By C. Searle, M.D., M.R.C.S.L., Bath.

If the views I have taken of fever be correct, the principal indications of treatment obviously bear reference to the cause or causes giving rise to this affection. Thus, if the fever originates in exsanguination from hæmorrhage or the too free use of the lancet, or from inanition, or impoverishment of the blood, the stage of excitement should be moderated or kept within due limits by tepid ablution of the surface, and for internal administration water saturated with carbonic acid gas, cool enemata, and the like gentle means; and milk, or a farinaceo-gelatinous, or other suitable nutriment, should be afforded,—suitable, be it remembered, both in quality and quantity with the weakened state of the digestive and assimilative functions. At the same time we must bear in mind duly to support or sustain capillary action to the point of health, as nearly as possible with the weakened state of the system, by wine or other cordial, whereby the recurrence of congestion will be prevented, and the return of fever in consequence.

It is in such cases that opium has been so generally advised, and a most useful remedy it is, judiciously employed. Its operation on the system, it will, however, be remembered, is threefold; in small and repeated doses, or in a moderately large one, it is stimulant in the first instance; this is succeeded by quietness and sleep, and that by exhaustion —equivalent, in most cases, to the previous excitement. In having recourse to it we must, therefore, bear in mind the indications of the period or stage of fever at the time being, that the patient may have the full advantage of the restorative agency of balmy sleep, as well as of its stimulating operation at appropriate periods; and that the succeeding stage of exhaustion be anticipated and provided against by the administration of timely and suitable cordials, or congestion and fever, or collapse, may ensue. The powers of the system must, therefore, be in this and in every particular carefully husbanded, and every cause of excitement, as well as of expenditure of power, by rising from the bed, reading, talking, &c., must be cautiously avoided, and great attention be observed withal to secure to the patient fresh air and immunity at the same time from the cold.

Next, should the cause of excitement be the blood's surcharge with carbon from defective oxygenation of the blood, the effects of cold upon the system, as previously explained; or otherwise, the effects of heat, as in a hot season or tropical climate, by consequence of a rarefied and attenuated atmosphere; the excitement of the torpid capillaries and the purification of the blood by the excitement of the secretive and excretive functions, are the chief indications of practice; and as in the composition of bile, carbon is so large a constituent, and as the liver and vessels of the portal circulation, from the reasons before given in cholera, are more particularly liable to become the seats of engorgement, the excitement of the hepatic function would appear chief in importance. Hence mercurials, antimony, and purgatives, are our principal remedies; and as I believe the direct effect of mercury to be the increase of capillary action, hence the excitement of the secretive functions in general and the deobstruent powers of mercury, which is of all remedies the most useful. As this cause of fever may be based upon, or exist with, a plethoric condition of vessels or phlogistic habit, favouring the synochal form of fever in a more exalted degree, febrile excitement may run high, or inflammation may become developed; and as the liver and bowels are more particularly the seat of engorgement (hence the precordial oppression), so are they proportionately liable to inflammation and derangement of function; hence cholera morbus, hepatitis, and dysentery, the diseases of hot climates and seasons; as well as diarrhœa and gastro enteritis, or pneumonia and its modification in this country, where aerial transitions are considerable, and the skin and lungs especially subjected to such influence, and predisposition to such affections often great, requiring for their treatment, in addition to the fore-mentioned remedies, the free use of blood-letting and the warm bath, derivatives, and all the *et ceteras* experience has proved to be useful in such cases.

The same cause of fever coming into operation conjointly with malaria, may, as I have elsewhere observed, so depress the functions of life that reaction or excitement may not, or otherwise may very partially take place; hence sporadic cases of congestive cholera occur, both in this and in tropical countries, from a milder cause than usually gives rise to this affection; and hence, likewise, from the conjoint but mitigated influence of one or other of these causes, arise the bilious remittent and compounds of this description of fever in India, and the typhoidal fevers of this country, the treatment of which we shall speak of hereafter.

Again, reverting to malaria as a cause of fever, of which intermittent is the most simple form and type of the class, the same indications of treatment, or the blood's purification, would appear to be the chief intention to be held in view, and assuredly may be resorted to with a certain degree of benefit. I should, however, add, in reference rather to the predisposing or exciting cause,

* In continuation from p. 373.

or to the effects upon the system resulting from the blood's contamination with this poison than to this agent itself. Experience having proved to us that malaria giving rise to intermittent fever, having taken possession of the blood, adheres to it with a degree of pertinacity that will not readily yield to these means, or allow us wholly to depend upon them. We may, therefore, conclude that none of the secretive organs have any direct power of eliminating or divesting the blood of this aerial poison, in common with some other poisons of this class. Hence we find fever and hydrophobia occurring often many weeks after the blood's impregnation with the virus, or if I may be allowed the expression, the seeds of the disease have been sown.

In the case of malaria, although it may not be in our power to divest the blood of its presence altogether by the excitement of the secretive organs, the effects of the poison upon the system in inducing congestion of the viscera and torpifying and deranging the liver and secretive functions, it is in our power to obviate or remove by such means; and by the agency of another remedy its action upon the system we may supersede or annul, and this I believe to be the operation of the cinchona, or quinine—its active constituent in effecting. The effects of this remedy may be, therefore, to combine with and neutralise this poison, or to impart qualities to the blood incompatible with its operation. Or it may be that of a stimulus upon the capillary system, more permanent perhaps than any other known to us (and hence its acknowledged qualities as a tonic), thus preventing the congestion of the veins which would ensue from the debilitating influence of malaria, and its consequence capillary excitement. Whatever its action, general experience at all events testifies that quinine, administered to a certain quantity, supersedes that of malaria upon the system, or prevents the development of intermittent fever as well as of its recurrence, and many other varieties of this type of fevers; and this it does without reference, I would say, to the mode of its administration so much as to the quantity admitted into the system. The point to be aimed at is the blood's saturation to a certain amount, and this I have noticed in many cases to be marked by the following characteristic symptoms: a sense of fulness or rather of tightness in the head, singing noise in the ears, deafness, and obtundity of intellect—effects which I have very generally seen to follow the administration of a scruple of quinine, in doses of a grain or two every hour during the apyrexia, or an equivalent quantity of the cinchona in powder, and fever seldom to recur after these symptoms have become manifest. Such, at least, is my experience, which, be it observed, has been considerable in the treatment of fevers of this class, having held medical charge of the garrison of Seringapatam for a period of four years, where fevers of this order, from simple intermittent to the exalted affection of typhus icterodes of authors, are endemical throughout the year, and suffered much thereby in my own person. And from observations made since my return to England I am warranted in saying that fevers from similar causes, malarious influence, variously modified by temperature, season, and a variety of circumstances, and assuming a variety of forms, as acute rheumatism, influenza, scarlatina, and other forms of the exanthemata, and often of epidemic prevalence as well, are of much more frequent occurrence than the profession in general are aware of, and to which I would invite their particular attention, as calling for the use of this remedy, which of late years, in the treatment of these varieties of fever, it has not been much the fashion to employ. And to which circumstance the frequent fatality of such cases are, in my opinion, mainly to be attributed; as I know of no remedy which can fill the place of this in fever, where this is the one really indicated, and which it may be well to remark are more particularly characterised by periods of exacerbation or remission. In support of these opinions I shall, in a future communication, offer a few cases of each coming under my own immediate observation.

It must be obvious that the fevers of malaria may be, as in the forms originating with the blood's surcharge or contamination with carbon, based upon, or be connected with, fulness of system, or a condition favourable in other respects to the development of the synochal form of fever; and thus may the attack be preceded by great depression or convulsions in the cold stage, and the excitement of fever which succeeds this give rise to inflammation in some organ or structure in which predisposition exists, or susceptibility of structure renders more particularly amenable to its operation; and as the viscera of the abdominal cavity and the brain, from the peculiarity of their circulation, as I have previously pointed out when on the subject of cholera, are more particularly prone to congestion, so are they —the stomach, bowels, spleen, and head—to inflammation; and hence the frequent affection of these organs in simple intermittent and all the varieties of the order, as well as the imperfect intermissions and complications which ensue, in consequence of these inflammations which take place maintaining a continued excitement, in many of the species of this, the typhoidal order, and remitting types of fever.

And, to this compound affection of inflammation, based upon a disease of debility, indicating, it would appear, two opposite modes of treatment, and requiring a very nice and discriminating practice, originate

the diversity of opinion which exists among the profession, and the indefinite line of practice laid down by most writers for the treatment of such affections; but which, I hope, the explanation afforded will tend to remove, as it exhibits, I am of opinion, that the general treatment should bear reference to the cause, and the particular to the local affection, in these cases; and thus may bleeding and bark prove not incompatible remedies with each other, each having its due share and respective weight in the treatment.

Bath, May, 10, 1843.

PATHOLOGY AND TREATMENT OF RICKETS AND MOLLITIES OSSIUM.

The diseases which exert the greatest influence over the condition of the bones, altering them from their normal state, are scrofulous affections, to which rickets and mollities ossium may be considered as belonging. In these two diseases, the earthy matter of the bone becomes diminished, and the bone falls into a state such as if it had been macerated in muriatic acid; supple, flexible, and ill-adapted to serve as a support to the other organs of the body. The cartilage itself itself submits to an essential alteration, and is incapable of being converted by boiling into gelatine.

Concurrently with these changes, phosphate of lime is eliminated in large quantities with the urine. This salt, otherwise little soluble, and discharged generally only in small quantity by the kidneys, is, according to Berzelius, readily soluble in lactic acid; anything, therefore, which causes a superabundance of this acid in the system is capable of depriving the organism of a large share of the earthy matter of the bones. Sugar of milk, grape sugar, starch, and gum, are readily converted into lactic acid, but they are so in the stomach only when digestion is ill performed, in which case lactic acid may be an abundant product in the system.

Rickets and mollities ossium, therefore, are not essentially diseases of the bones, but seem to be results of imperfect digestion or nutrition; to improve which is consequently our first indication. None of the substances readily converted into lactic acid should be taken, as sugar, starch, gum, &c., nor even milk (rickets are often the consequence of children having been too long suckled), but animal food and such other as is freely digestible should be chosen, in aid of which we ought to employ such medicines as may restore the general tone of the system.—*Marchand, in Journ. de Pharm. et de Chimie.*

ON LUNAR INFLUENCE; BEING A FOURTH CONTRIBUTION TO PROLEPTICS.*

By T. Laycock, M.D., Physician to the Dispensary, York.

The opinions hitherto held by scientific men on the validity of the doctrine of lunar influence have been remarkably discordant. The sceptical have always been unphilosophical in their scepticism, and the believers up to the time of Mead were credulous in their belief; both agreed, however, in admitting or rejecting the doctrine without much examination. As it has had, and may have, an important bearing on proleptical science, I propose to review the subject in a spirit of impartiality.

The phases of the moon have measured time from a very early period. Mr. Cullimore traces evidence of a lunar division of time on the bricks of Nineveh and Babylon, and Sir G. Wilkinson is of opinion that the circumstance of the god Lunus being the dispenser of time, and represented as noting off years upon the palm-branch, leads to the idea that in former years the Egyptians calculated by lunar instead of solar years. The hieroglyphic of a month, which is a lunar crescent, shows, also, that their months were originally lunar. The derivation of the word *month* in our own language, and of *monat* and Μήν in the German and Greek, sufficiently proves that the moon was likewise the measurer of the months at a very early period in the history of European nations.

This connection of the moon with the measure of time seems to have brought that planet into relation with the religious rites of ancient nations, as the Egyptians and Jews; and also to have given origin (in part) to the *mythological* idea so extensively prevalent of a lunar influence on marriage and child-bearing. Even the barbarous Greenlanders, as Egede informs us, believe in this superstitious notion. They imagine that the moon visits their wives now and then; that staring long at the full moon will make a maid pregnant, &c. Among the ancient nations the general idea was, that the lunar influence varied according to the age of the moon. Bombastes, the Egyptian Diana, was not equally favourable to parturient females and their offspring in her different phases. Among the Jews the full moon was believed to be lucky, and the two other disastrous. "The full moon," says the Rabbi Abravanel, "is propitious to new-born children, but if the child be born in the increase or wane, the horns of that planet cause death; or, if it survive, it is

* See Lancet, Vol. I., 1842-43, pp. 124 160, 423, 929.

generally guilty of some enormous crime."* The Greeks and Romans entertained a similar idea respecting the lunar phases. The general opinion seems to have been that the moon was propitious in proportion as its luminous face was on the increase.† The ancient Greeks considered the day of the full moon to be the best day for marriage. Euripides makes Agamemnon answer, when asked on what day he intends to be married,—

"Οταν Σελήνης εὐτυχὴς ἔλθῃ κύκλος.

"When the bless'd season of full moon is come."—*Iphig.*, act v., 717.

Hesiod asserted that the fourth day of the moon was propitious, but the eighteenth was bad, especially to the female. The Lacedæmonians thought it unlucky to march to war before the full of the moon, or to make commanders at any other time than the new moon.‡ But illustrations of this kind might be multiplied to a great extent. Those who are curious in the matter will do well to refer to Dr. Prichard's work already quoted, to "The Doctor," vol. iii., p. 186, to Dr. Milligan's "Curiosities of Medical Experience," vol. i., p. 113, and (if they can get it) to "Astrologia Restaurata, by William Ramesey, Gent., Student in Astrology, Physick," &c., folio, Lond., 1653. This Ramesey was probably the son of Davy Ramsey, celebrated by Scott, in the "Fortunes of Nigel," and who says of the nativity of the Duke of Buckingham,—

> "Full moon and high sea,
> Great man shalt thou be;
> Red dawning, stormy sky,
> Bloody death shalt thou die."—Chap. vi.

The influence of the moon was acknowledged in magic and alchemy, as well as in mythology and astrology. Trallian directs a magical ring for the colic to be prepared on the seventeenth or twenty-first day of the moon.§ In Ben Jonson's "Alchemist," a play which, from the known accuracy of its author, may be considered as representing the swindlers in that line who were his contemporaries, TRIBULATION says,—

> "But how long time,
> Sir, must the saints expect?
> "SUBTLE. Let me see,
> How's the moon now? Eight, nine, ten days hence,
> He will be silver potate: then three days
> Before he citronise,—some fifteen days."
> Act iii., scene 1.

Medical science could not escape being involved in these notions. Indeed, the idea of a physiological and pathological influence is directly connected with the mythological; but this idea was conjoined with the doctrine of septenaries, and necessarily so, because the observed vital period of seven days was conterminous with the lunar period of seven days, or one week. In the second century we find Galen discussing this connection between the moon's influence and critical days, *in extenso*, and with great ingenuity, and his doctrines revived, but not improved, by Actuarius in the twelfth. That these doctrines influenced medical language and practice to a great extent might be proved by various historical facts. For example, in Matth. xviii., verse 13, of a person described as falling oft into the fire and oft into the water, it is said that he (σεληνιαζεται) is affected by the moon. Trallian, using the same word, terms *epileptics*, σεληνιακοι.* Apuleius, a Latin author, also terms epileptics *lunatici*. In Mr. Wright's "Biographia Literaria" it is stated, that one day John of Beverley entered the nunnery of Wetadun (supposed to be Wetton, in Yorkshire), where the abbess called him to visit a sister in whom the operation of bleeding had been followed by dangerous symptoms. When he was informed that she had been bled on the fourth day of the moon he blamed the abbess severely for her ignorance; "for," said he, "I remember that Archbishop Theodore, of blessed memory, said, that bleeding was very dangerous at the time when both the light of the moon and the flood of the ocean were on the increase." This notion influenced medical practice to the time of Van Swieten.

Mead was the first of modern writers who considered the doctrine of lunar influence in a truly philosophical spirit. His work on the subject is still worthy perusal.† He anticipated the doctrine of atmospheric tides. He declared that the moon's influence would be found to be greatest at apogee and perigee. He showed, from various calculations, that the atmospheric pressure on the body might vary in consequence of the moon's influence on the atmosphere, to the extent of three thousand and sixty-two pounds, forcibly adding, "Fieri tamen nequit quin magnum sæpe momentum habeat tam insignis variatio."—P. 28. In short, Mead brought the subject before the profession as completely as the state of science at the time would permit. The last century has been more prolific in correct and extended observations on the subject than the preceding ten. These I shall attempt to collate and arrange.

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* Basnages, Histoire des Juifs, IV., chap. xi.

† Prichard, Analysis of the Egyptian Mythology, 8vo., Lond., 1819, p. 72.

‡ Archæol. Atticæ, by Z. Bogan, 5th ed., 4to., Oxford, 1658, p. 327.

§ Lib. x., cap. i.

* Lib. i., cap. xv.

† "De Imperio Solis ac Lunæ in Corpora Humana, et Morbis inde Oriundis." Ed. Altera, 8vo., Lond., 1746.

Influence of the Moon on Fevers and on the Spread and Duration of Epidemics.

Testa quotes Gillespie, or Symmons, as having communicated to the "London Medical Journal," for 1785, cases in which ulcers showed an evident connection with the moon's changes, and also refers to remarks to the effect that the knowledge of lunar influence may be used proleptically in the treatment of intermittents. Balfour republished his tract, at about the same time, at Edinburgh, by the special recommendation of Cullen. It is worthy of remark that Balfour also refers to the proleptical use of the knowledge of lunar influence. His views are as follows:—1. That in Bengal, fevers of every denomination are, in a remarkable manner, connected with and affected by the revolutions of the moon. 3. That in Bengal, a constant and particular attention to the revolution of the moon is of the greatest importance in the cure and prevention of fevers. 3. That the influence of the moon in fevers prevails in a similar manner in every inhabited part of the globe. 4. That the whole doctrine of the crisis of fevers may be readily explained from the premises established respecting the influence of the moon in these disorders at the full and change.* The fever which came under Balfour's observation in Bengal was a bilious intermittent, appearing most commonly as a tertian or quotidian. The moon's influence was exhibited at full and change by the greater number of attacks and relapses which took place in the three days preceding and the three days following each of those periods. The first and second propositions are alone substantiated by his observations. In considering his fourth proposition he was quite unconscious of the general law I have before demonstrated. Ambrose Parè observed that people were more liable to be attacked by the plague at the full moon. Diemerbroeck (as quoted by Mead) also relates that in the plague of 1636, two or three days before and after the new and full moon, the disease was more violent, and that more persons were seized at those times than at any other, and in a more fatal manner. Ramazzini asserts that the influence of the new and full mooon, but particularly of the former, was matter of general observation during the prevalence of an epidemic fever at Modena. Balfour quoted Dr. Lind, as entertaining views similar to his own, and he has since been supported by several physicians and surgeons of the Indian armies. Dr. Scot asserted that the influence of the moon on the human body in India was well known to every medical practitioner. It was universally acknowledged by the doctors of all colours, of all castes, and of all countries. Dr. Farquhar corroborated these assertions. Mr. Pearson, an Indian surgeon, declares "that a careful observation of disease in that climate will corroborate the inferences of Dr. Balfour that the attacks and fatal terminations of febrile disease and of dysentery, retention in the intestinal canal, aggravations of spasmodic and nervous affections, take place most frequently during the lunar periods, *i.e.*, in fifty hours before and after the new and full moon."* Dr. Kennedy, in his work on the Epidemic Cholera, also declares, "The constitution here [India], both of native and denizen, is assuredly under lunar influence, or, what is the same thing, under the influence of the changes of weather, which as invariably accompany the changes of the planet as the ocean." (chap. vi.) No recent writer has entered so fully into this part of the subject as Mr. Orton.† Individual cases which came under his own observation are related in support of the doctrine, and establish it apparently beyond controversy. One gentleman, for example, had a paroxysm of intermittent fever every lunar month, at the new moon, for two years and eight months. For two successive years he had one paroxysm only in the month, and that was *invariably* at the new moon (p. 204, also 394). Mr. Orton constructs the following diagram in support of Balfour's views:—

The black lines are the unhealthy periods; the dotted lines the more favourable periods. Each period extends for three days and three-quarters before and after the full and new moon, or the quarters. Mr. Orton then enters into a number of details as to the day of the moon on which the cholera appeared at various places in India, and presents the result of forty-six instances in the following table:—

* A Treatise on the Influence of the Moon in Fevers. By Francis Balfour, M.D. 8vo. Edinburgh, 1785.

* On the Diseases of Warm Climates. London Medical and Physical Journal, vol. xi., p. 204.

† On the Epidemic Cholera of India, 2nd ed., 1831.

Days before and after full or change.

Appearances of the cholera	1	2	3	4	5	6	7 and 7½ (the quarter).
	16	15	5	5	2	3	No instance.

The first column contains the instances in which the cholera appeared on the day of the *syzigee*, as well as that before or after. The attacks which commenced on the plenilunar, or light half, of the moon, were twenty eight; on the novilunar, or dark half, eight. Mr. Orton consequently infers, "that the moon's syzigees have a very marked influence in producing the disease, and the quarters in removing it." The progress of the cholera in York, Glasgow, and Manchester, did not exactly corroborate Mr. Orton's views, as the following tables show :—

Progress of Cholera in *York* from June 2nd to August, 13th, 1832,—

	New Cases per diem.	Deaths per diem.
At quadratures, including the day preceding and following	5.40	1.93
On other days.....	5.63	1.72
On three days at new and full moon	5.46	2.00
On three days at quarters	5.33	1.96

In *Glasgow*, from Feb. 13th to May 24th, 1832,—

	New Cases per diem.	Deaths per diem.
On three days at quadratures	9.52	5.69
On other days.....	11.42	5.80
On three days at new and full moons	8.09	4.30
At quarters	11.90	6.76

In *Manchester* from 1st to 23rd August,—
On three days at quadratures, 17.77 new cases per diem.
On other days, 20.71 new cases per diem.

The difference in the results between these tables and Mr. Orton's may, indeed, be attributable to the difference of climate, for we have seen how more regularly the atmospheric tides recur within the tropics than the temperate zones. Besides, we can scarcely set off *negative* results against the numerous *positive* observations detailed by various individuals, and all leading to the same result. And, in fact, these observers are borne out by what is noticed in other tropical countries. "Him fever," says the Negro, in the West Indies, "shall go when the water come low. Him alway come hot when the tide high."* "Major Moore says that near the tropics, especially in situations where the tide of the sea has a great rise and fall, scarcely any person, and certainly no one affected with feverish or nervous symptoms, is exempted from extraordinary sensations at the period of the spring-tides."* The arriero, or muleteer, of Peru takes care not to unsaddle his mules in the *creciente* or increase of the moon, until they have cooled, otherwise they would be disabled by abscesses, which would rapidly form on the shoulders or loins.†

Lunar Influence in Affections of the Nervous System.

It is yet a popular opinion that epilepsy, insanity, and asthma, recur at intervals regulated by the moon. Mead mentions a case of convulsions in a young female, the paroxysms of which corresponded in their accession with the flow of the tide, and in their cessation with the ebb. Brookes, a popular writer in his day, recommends the remedies for epilepsy to be given a day or two before the new and full moon, as the disease returns at the periods of the moon, especially the new and full. He mentions another convulsive disease in which the accessions of the fits keep exact pace with the phases of the moon.‡ A very minutely detailed case of periodic asthma was communicated to the Royal Academy of Madrid by Dr. Franzieri, physician to the court.§ The history extends over a period of twenty-one years; but it is enough to state here, that for four years the days of intermission counted from the very day of the new moon to that preceding the eve of the full moon, and from the day of the full moon to the day before the eve of the new one. In a case of hysteralgia detailed by Dr. Rutter, he says, "The pain was also greatly increased at the new and full moon. She first directed my attention to this circumstance, and I observed it for many years afterwards to recur with a degree of regularity which leaves no room to doubt the fact, to whatever cause it may be ascribed."‖ Dr. Ebers, of Breslau, has lately published an interesting example of somnambulism in a boy, aged eleven years, and which he watched himself closely. The paroxysms came on regularly every full moon.¶

* The Doctor, vol. iii., p. 179.

† Peru as it is; by Dr. Smith.

‡ Gen. Pract. of Physic, vol. i., p. 279, 6th edition.

§ See Lond. Med. and Phy. Journal, vol. iii., p. 401.

‖ Edin. Med. and Surg. Jour., vol. iv., p. 170.

¶ Casper's Wochenschrift, numbers 46, 47 (1838).

Influence of the Moon on Insanity.

The evidence on this point is conflicting. Dr. Arnold says that he could never clearly and certainly perceive any such lunar influence.* In the annual report of the State Lunatic Asylum, Worcester, Massachusetts, a table of fifty cases of periodical excitement is given, and their relations to the moon.

There occurred, on the average,—

At the new moon	20
middle of ditto	13
At the first quarter.....	15
middle of ditto	11
At full moon	12
middle of ditto	11
At last quarter	13
middle of ditto	18

The periods, however, in one half were not exoteric, but esoteric, in their origin; for in twenty-five the paroxysms occurred at very nearly regular intervals of four, six, eight, and twelve weeks. In one the intervals were tertian. These cases should have been separated from the others. M. Daguin, physician to the Lunatic Hospital at Chambery (Savoy), made numerous observations, and was decidedly of opinion that the moon exercises a constant and real influence on insane people. Dr. Michael Allen strenuously advocates the doctrine.† He divides the phases of the moon into four periods of increased and diminished excitement: the former commence two days before new and full moon, and continue for four days after; the latter commence three days before the quarters and continue for four days after. In fact, the division of the lunation corresponds almost exactly with Mr. Orton's; his unfavourable periods answering to Dr. Allen's periods of increased excitement, as the following diagram shows:—

Diagram of Dr. Allen's Observations.

The latter author appeals to a table of deaths which occurred in his establishment, the result is as follows:—At full moon 11 died; new moon, 15; first quarter, 1; last quarter three died. But even this table is nullified by the experience of the Retreat. Mr. Thurnam kindly furnished me with details.

Deaths at the Retreat for forty-four years, arranged on Dr. Allen's hypothesis:—At full moon, 33; new moon, 40; first quarter, 34; last quarter, 32.

The plus negatives the minus. I may add here that MM. Leuret and Metivie made observations on the frequency and irritability of the pulse of insane people at the moon's phases during August and September. The patients at the Salpetriere and Maison de Santé d'Ivry were examined:—*

	Last quarter.	New moon.	First quarter.	Full moon.
Frequency of the pulse at....	85.67	81.62	80.55	79.80
Per cent. in whom it was quickened at	57.12	34.72	34.72	23.52

I have had asthmatic and epileptic patients who complained of lunar influence, but I could never satisfactorily ascertain that it was exerted. The paroxysms certainly occurred at intervals of a lunar month, and *about* the time of a lunation; but this might be simply a coincidence of the esoteric cycle with the lunar, and nothing more. A medical friend informs me of a case in which the patient is much more easily excited by alcholic drinks at the full moon than at any other time. Chatterton, like Milton, imagined his intellect was more vigorous at the full moon. ‡

Other Diseases and Functions under Lunar Influence.

The very ancient doctrine that the periodical change in the sex is under lunar influence has still its advocates. Dr. Flachs, a German critic, in a review of Dr. Davis' work on Midwifery, controverts an opinion of that writer to the contrary. He says that the fact is well ascertained, and that the full moon is most influential. Mead quotes cases to prove that leucorrhœal discharges are under lunar influence. "It is a fact worthy of remark," says Mr. Lambert,† "that the new and full moon are the periods at which the Kookies generally commence their operation of catching the wild gyalls, from having observed that at these changes the two

* Observations on Lunacy, &c., vol. i., p. 324

† Cases of Insanity. 8vo., 1831.

‡ Works, edited by Southey, 1803, vol. i., p. 34.

* Lond. Med. and Surg. Jour., vol. iv., p. 688.

† Account of the Bos Frontalis, or Gyall. Linn. Trans., vol. vii., p. 305.

sexes are most inclined to associate. The same observation has often been made to me by our elephant-catchers." In the earlier volumes of the "Philosophical Transactions" are histories of *hæmorrhages* which broke out at lunar periods. Mead relates a curious instance of this kind. Dr. Pitcairne was seized at a country seat near Edinburgh with a bleeding from the nose and faintness, at the exact hour of the new moon, namely, nine o'clock, a.m. On returning to Edinburgh he was informed that Mr. Cockburn, professor of philosophy, had died, suddenly, at the same hour, from hæmorrhage from the lungs, and also that five or six of his patients had been seized with hæmorrhages. The barometer was lower at that hour than either he or his friend Dr. Gregory had ever observed it. *The births and deaths* of mankind generally have been supposed to be under lunar influence. It was formerly supposed in the Netherlands that fat people died at the flood, and thin spare people at the ebb. Among the wonders of the isle and city of Cadiz one is, that the sick never die there while the tide is rising, but always during the ebb. Dr. Moseley made out a list of persons who had died aged from one hundred and thirteen to one hundred and sixty-nine years, to prove that very old people die at the new or full moon. He also infers from the times of death of forty illustrious persons, that the same rule holds good with mankind in general. Three or four years ago Mr. Procter (now resident medical officer at the York County Hospital) made me out a list of the births, with their dates, which had occurred in the practice of Mr. James Allen, of this city, during the five years from 1831 to 1835 inclusive. On arranging these according to the changes of the moon the result was as follows:—Number of births at new moon, 151; first quarter, 129; full moon, 131; last quarter, 154. The day before and the day after the day of change were included in the estimate. The whole number of births were 1403; of lunations, 247; of days included in the lunations, 741, or 247×3.

It is remarkable that the ancient doctrine of lunar influence on vegetation is still practically applied in some tropical countries. "Herbs set in the wane of the moon," says William Ramesey, quoting this doctrine, "do not thrive well; vines, to check their growth, should be pruned in the wane; timber cut to keep well," &c. Dr. Robertson asserts that in the West Indies all sorts of vegetables are fuller of sap at the new and full moon; the colonists, therefore, abstain from cutting wood at these periods, but sugar-canes are cut and castor-oil nuts are gathered at these seasons, the latter being supposed to yield one-fifth more oil at those times than at any other. This influence of the moon is still acknowledged, at least in Cuba, as Mr. Backhouse informs us, in the account of his travels, lately published. The moon also guides the agricultural operations in Peru. "The maize crops," says Dr. Smith, in his work before quoted, "the farmers always harvest in the '*menguante*,' or decrease of the moon; for it is a fact, known to every husbandman, that if they collect the crop in the '*creciente*,' or increase of the moon, it will not keep free of moths for three months, even though allowed the advantage of being left in the husk." Around Lima the farmer takes care not to sow in the *creciente*, or the woodcutter to cut timber, especially willow and elder, or it soon decays, as Dr. Smith found out by his own experience.

It has been supposed that the moon exercises an attractive power on the fluids of living structures, like that exhibited on the great masses of water on the globe. I think this hypothesis need not be discussed or noticed further. It has also been supposed that the *light* of the moon has a direct influence on vital function. The sun's rays may certainly be so altered by impinging on the moon, that when reflected from the latter they may have a chemical and physiological action very different from those proceeding directly from the former. Testa discusses the question at considerable length.* Supposing it to be proved that the moon's light have an injurious influence, I think it scarcely belongs to my subject. Shutters or an awning will at any time effectually neutralise it, so far as man is concerned. Be this as it may, there are no observations extant worthy notice.

In accordance with my previous plan I shall next proceed to compare physiological and pathological observations with meteorological phenomena, and consider whether there be any changes in the density, electric tension, or hygrometric condition of the air at the lunar phases, whether there be changes in the direction of its currents, and whether these changes have any connection with the observed changes in vital function, and how it takes place. This will form the subject of another communication.

One word on the claim to discoveries. I again repeat that the discovery of the *idea* of vital periodity, or the first perception of that idea is not mine. It would be just as rational to claim the discovery of the fact that two and three make five, as the discovery of that idea. What I appropriate is, a *law* of vital periodicity, not *the idea*; not

* Bemerkungen über die periodischen Veränderungen und Erscheinungen im kranken und gesundem Zustande des menschlichen Körpers, Leipzig, 1790, p. 337, seq. This is a translation from the Latin of Testa. Testa's book, I may observe, contains more rational facts and arguments on the subject of vital periodicity than any work of the time that I am acquainted with. He took it up where Mead left it.

that there *are* periods (every body knows that there are), but the principle, or law, by which *duration* of certain vital periods may be reduced to a common denominator. This is mine; that the periods observed in the life of insects; the period of the incubation of the ovum, both of invertebrate and vertebrate animals; the periods of various functional acts and changes as oviposition and nidification in birds, and menstruation in females; the critical days of fevers; the periods of agues; and the periods of paroxysmal diseases, as gout and epilepsy, are all reducible to a common denominator,—are all governed, *as to duration*, by the same general law. I may be permitted to add that the demonstration (given in my last) of the identity as to length and division of the physiological, pathological, and meteorological day of twelve hours is novel. Now there is not one word of all this in the book of the unhappy man whose disgraceful letters are recorded in THE LANCET. He never even suspected these facts. In short, he has made no scientific discoveries whatever, and his charges of plagiarism, both against Dr. Holland and myself, are thoroughly contemptible.

York, June 6, 1843.

WOUNDS OF SEROUS MEMBRANES.

A CAVITY below is touched, its serous lining is perforated. A railing may have penetrated the peritoneum in an idle climbing boy. In this dangerous wound strive to obtain adhesion. If the membrane unite, or the bowel so adhere as to close the wound, danger is past, and you have only a simple wound to heal. The risk is, that the suppuration of the lips of the wound propagate its action over the whole cavity, producing pain, tumefaction, sympathetic fever. Subdue this by every means."—*Sir Charles Bell.*

BIRTHS EXTRAORDINARY!—In January last a good lady of Beauval, in France, had a miscarriage, and was delivered of a female fœtus about one hundred and ten days from conception, after which she soon recovered and resumed her usual occupations. About a month after, however, she was again seized with labour-pains, and gave birth to a little gentleman about one hundred and forty days old, recovering from her troubles as easily as she had done at first. Judge, readers, of the thrifty dame's surprise when, about three weeks after, she experienced symptoms that a third *Monsieur Tonson* was on the eve of his arrival; and she was actually delivered of a live manikin about one hundred and sixty-five days old from conception, who verily breathed the vital air during two long hours! This is a most extraordinary fact, *if true*, and we shall not fail to apprise our readers when this prolific lady favours the world with a fourth child from one and the same pregnancy!

ULCERATION OF THE MUCOUS MEMBRANE,

FOLLOWING THE LONG-CONTINUED

USE OF IODINE.

To the Editor of THE LANCET.

SIR,—I beg to call the attention of the profession, through the medium of your valuable Journal, to the probability of long and indiscriminate courses of iodine sometimes inducing ulceration of the mucous membranes. Of several cases which have come under my notice, tending to confirm this opinion, I will relate the two following:—

CASE 1.—Miss T., about twenty, applied to me two or three years ago; my first impression on seeing her was that she was in a confirmed consumption. She was exceedingly emaciated; her face flushed with hectic; pulse 120; and her strength greatly reduced by colliquative sweats. In addition to these symptoms she was daily expectorating a large quantity of *purulent* matter. The sounds elicited by the chest, on percussion, were, however, uniformly clear, and the respiratory murmur everywhere *perceptible*, though somewhat obscured by râle muqueux. There was no pectoriloquy. On noticing she had a full throat, she told me that at the recommendation of her admirer she had been taking "iodine drops" for several months, and during that time had been gradually getting thinner and weaker. I desired her immediately to discontinue the iodine, recommended nourishing diet and plenty of fresh air, and prescribed tonics with mineral acids. Though she slowly and steadily improved, and has since married her iodine friend, she continued thin and weak, suffering from cough and muco-purulent expectoration for many months, but has now thoroughly regained her former health and strength.

CASE 2.—Mrs. A., a married lady, during several weeks had been taking the compound tincture of iodine internally, and using frictions of the iodine ointment externally, for a large subcutaneous fatty tumour of the lower part of the abdomen. About three months ago she applied to me with the following symptoms: her appearance was considerably emaciated, and she complained of great debility. The pulse was weak, and not more than 40 in the minute. She had a constant and copious discharge of purulent matter from the vagina. A still larger quantity of pus was also evacuated from the *rectum* with each motion, accompanied with a good deal of uneasiness. The superficial tumour had remained unaltered; it was unattached, and external to, the abdominal muscles, and had never been affected either with heat or tenderness. It was of several years growth. On examination, the mucous membrane of the vagina

was found studded with numerous superficial ulcers pouring out purulent matter. The patient was desired to discontinue her iodine remedies, when tonics and astringents were exhibited, with injections of a weak solution of sulphate of copper. Under this treatment the discharge, both from the rectum and vagina, has gradually diminished, the ulcers healed, and the patient recovered her usual strength and *embonpoint*.

As the mucous membranes are so readily disposed to ulceration one might, *à priori*, anticipate such an effect from the long-continued use of remedies acting especially on the absorbent system. Could the *local* application of the iodine in the last case determine the action of the remedy more particularly to the *lower* mucous surfaces? I forget whether, in the first case, frictions were used to the enlarged thyroid gland.

If the long-continued use of iodine have a tendency to induce ulceration of the mucous membranes it is obvious that it ought to be given with great caution where there is any consumptive tendency. Before the use of iodine as a distinct substance I well remember the great prejudice that existed on the part of patients against taking the *burnt sponge*, the active ingredient of which is iodine, from an idea that it frequently induced consumption, and I think I recollect several cases tending to confirm the opinion.
I am, Sir, your obedient servant,

T. E. Rawson.

Kegworth, Leicestershire,
June, 1843.

DYSENTERY FROM ERGOT OF RYE.

In the course of last year a great number of persons in the French department Loire-Inferieure (Brittany), were attacked with a species of dysentery after having eaten of damaged rye. The individuals were seized with vomitings of bilious matters mixed with blood; and the stools, which were at first mucous, became afterwards bilious and sanguinolent. The pulse was quick and weak, and a generally adynamic condition ensued, under which the patient commonly succumbed about the tenth or twelfth day from the beginning of the attack. In one commune a practitioner gave his patients first a brisk emetic, and then a mixture composed of yellow cinchona bark, an ounce, and aqueous extract of opium, four grains, infused in a pint of boiling water for twenty-four hours, of which a tablespoonful was taken three times a-day. A pill of camphor, opium, and quinine, was taken every night; ptisans of marsh-mallows, emollient poultices to the abdomen, linseed enemata, and other palliative means, were used; and under under such treatment 25, out of 27 patients recovered.

NEW TREATMENT OF PLEURISY.

The following is a process adopted by Dr. Turck, of Plombieres, for curing pleuro-bronchitis, and which, in one case at least, has been attended with the happiest results. A man, aged 50, of a sanguine temperament, fat, and usually enjoying good health, caught a cold which terminated in a pleurisy, there being violent pain on the left side of the chest, greatly augmented at each movement of inspiration, and rendered intolerable by coughing; pulse full, hard, and 120 per minute, &c. Notwithstanding the vigorous constitution of the patient, Dr. Turck eschewed all depletory measures, or purgatives, and administered internally only a placebo mixture containing a small quantity of opium. He, however, ordered an alkaline lotion composed of caustic soda, with camphorated spirit, turpentine, and oil, with which the surface of the body was to be washed, in order to secure an abundant acid perspiration! and an open vessel was placed on either side of the bed, into which every half-hour was thrown some fresh ammonia, which should volatilise and impregnate the respired air. According to Dr. Turck, ammonia acts on the skin and on the mucous membrane of the lungs in a diametrically opposite manner, being as powerfully sedative on the latter as actively stimulant to the former; and in this way he supposes proximity to stables (in which much ammonia is generated) to have proved beneficial to phthisical patients. However this may be, it is stated that in the above case, the treatment of which began early in the morning,—"after the first hour an abundant perspiration broke out, which lasted all the forenoon. At noon, there was neither fever, nor cough, nor any pain in the chest. Two hours afterwards, fever reappeared with double violence, the pulse beating 140 per minute, and delirium ensued, but unattended with either pain or cough." Dr. T. attributed this to the too long continued employment of the strong alkaline lotion, for which he at once substituted embrocations of plain oil. At ten, p.m., of the same day, the patient was completely cured of both his pleuro-bronchitis, and the ill-effects which had ensued during the treatment. This case, which is related in a recent number of the "Gazette des Hôpitaux," we recommend to the scrutiny of medical theorists.

The proportion of deaths from phthisis among the natives at Malta is only about 5 per cent. of the whole mortality, while in England it varies from 20 to 30 per cent.—*Dr. Cook.*

Art is but the handmaid of nature, and the more attentively we watch her remedial processes the more successful shall we be in our curative efforts.—*Dr. Cook.*

THE LANCET.

London, Saturday, June 24, 1843.

In declaring that the study of anatomy is much neglected in this metropolis, we state that at which many persons may be disposed to laugh. What! *anatomy* neglected in London? Why, it has always been the staple of its medical schools,—the one thing to which the attention of students has been directed, almost to the exclusion of everything else. Very true; and yet we repeat that anatomy, in the fullest meaning of the term, has been, and is, grievously neglected in London. We grant that the student, when he leaves the schools in this capital, may, in general, be highly proficient in the structural anatomy of the human body, and, perhaps, well acquainted with the more prominent points of surgical anatomy. But his anatomical knowledge is, for the most part, isolated and barren; it has not been connected with physiological or pathological truths; and, as a necessary consequence, it very soon evaporates. Nothing tends so much to fix a *fact* in the mind as linking it with a *reason*. We recollect *how* a thing is, chiefly because we know *why* it should be so. By coupling anatomy with a direct reference both to healthy function and disease, the student not only acquires the means of indelibly impressing anatomical facts upon his memory, but he learns to discriminate between those which are worth retaining, and those which are not. From the absence of this method of studying, it too often happens that the mind of the London student is overburdened with a heterogeneous mass of anatomical facts, the relative importance of which he cannot appreciate. The origin, distribution, and connections of nerves which are implicated in the most important actions of health and disease,—an exact acquaintance with which is essential to the understanding of those actions, and easily retained if studied with due reference to them,—are viewed by such a student as him of whom we speak, in the same category with the origin and insertion of certain muscles of the back, which no human being can remember for any length of time, and which would not be worth the trouble of recollecting even were the recollection possible. The consequence is that many a man who leaves the schools with a thorough knowledge of mere structural anatomy, loses almost every trace of that knowledge before he has been a dozen years in practice. Thus the foundation of scientific medicine slips from under his feet, just when increasing experience and a maturer judgment might enable him to rear a fine and useful superstructure, and he lapses into a mere *routinier*. The application of anatomical facts to physiological and pathological reasoning is, then, no less essential to the durability than to the usefulness of anatomical attainments.

But, supposing the student to be well informed on all essential points of human anatomy, with their applications to the healthy and diseased actions of life, would that enable him to become a sound physiologist, and a philosophic medical reasoner? Certainly not. Simple human anatomy will not afford the basis of a single general doctrine in physiology, and so long as comparative anatomy was neglected, physiology remained obscure and almost stationary. The only grand discovery that was made before the eighteenth century—that of the circulation—forms no exception to the rule; for the notion of the circulation was first suggested to Harvey by comparative anatomy. He observed that in the various animals which he dissected the veins always had valves, and that those valves had their concavity towards the heart. He considered that there must be some important reason for a mode of structure that was universal, and he carried on his researches until the greatest discovery in physiology, one of the greatest in all science, was made. It was not the result of chance, or the winding up of a series of inquiries to which many minds had contributed. A simple fact was observed with

scientific keenness; parallel facts were brought together by a toilsome process of induction. A new and splendid hypothesis dawning on the mind of the philosopher, disturbed not the balance of his solid intellect, while, with enduring labour and self-restraining caution, he brought his doctrine to the severest tests, established it on an everlasting foundation, and revealed it to the world perfect, invulnerable, and tried as by fire.

But although HARVEY thus early and gloriously brought the comparison of organised beings to bear upon the science of life, few men, for more than a century, followed in the same track. Comparative anatomy was a study scarcely heard of, and physiology slumbered on the eminence to which one grand discovery had raised it. Thanks to HUNTER and CUVIER, it has now been awakened into a vigour and activity which compensate for its protracted torpor. The organic kingdoms lie spread before us as a vast physiological museum, in which nature exercises her own subtle and exquisite anatomy. We see parts developed and displayed in the order in which their functions become necessary, and curtailed or removed by the working of a power which obliterates each part as its function becomes useless, still preserving entire the mechanism of life. How superior is the knowledge afforded by such a display of the organs and functions of life to that derived from the mutilation of living animals! Revolting experiments may, indeed, occasionally seem necessary and justifiable, as affording the starting points of physiological research, or the tests of particular views; but, generally speaking, this mode of inquiry cannot lead to satisfactory results. Such experiments demonstrate how the phenomena of life are enfeebled or annihilated by the abrogation of a function, rather than how they are sustained by its exercise; and then death, not life, becomes the subject of observation. The comparison of organised beings, on the contrary, presents us with subjects that are curtailed of certain organs and functions, or altogether deprived of them, without detriment to life or health; it disjoins systems, and reunites them in various degrees of perfection, and this supplies us with the materials of synthetical as well as analytical observation.

With such resources at their command, it is much to be desired that medical education should be pursued in intimate connection with comparative anatomy. There are some men in the profession who "cannot, "for the life of them, perceive the use of "comparative anatomy. What," say they, "has the anatomy of a dog to do with the "treatment of fever in man?" Yet if this sort of protest be adopted in science, every department of philosophic knowledge would be reduced to empiricism, and all art become ridiculous. We hope that, generally speaking, a certain acquaintance with comparative anatomy is regarded as essential to form an enlightened member of the profession.

Closely connected with comparative anatomy, but of more recent origin and growth, is *transcendental* or *philosophical anatomy*, the name, even, of which is probably unknown to many students of medicine. This extraordinary study has, abroad, grown colossal even in its infancy, and, in a great measure, thrown down the barrier between physical and abstract science, by presenting to the mind rational types of material forms subjected to the senses. The department of philosophical anatomy that is more immediately interesting to the student of medicine is that relating to anomalies of organisation, the attraction of which is greatly increased when we reflect on the possibility that hereditary vices of conformation in the solid textures may eventually prove to be referrible to the same laws as the more obvious anomalies which constitute monstrosity, while it is almost certain that hereditary diseases that are dependent on a *materies morbi* pervading the blood are owing to some transmissible peculiarity in the constitution of that fluid. This view of hereditary disease, first distinctly propounded by Dr. HENRY HOLLAND, is in the highest degree worthy of attention.

Philosophical anatomy, then, is a branch of science equally engaging in its aspect, and important in its practical bearings, and should in no case be neglected by him who wishes to keep pace with the progress of scientific medicine.

Lastly, *microscopical anatomy*, which is an extension of ordinary minute anatomy, is a study from the successful pursuit of which physiology and pathology are anxiously expecting the solution of difficulties which at present oppose a complete barrier to their progress in certain directions. Now, if a microscope were placed in the hands of a large proportion of persons whose business it is to study medicine, they would not even know how to use the instrument, much less how to guard against the numerous fallacies which attend microscopic observations with those who are inexperienced in such researches.

Again we repeat the assertion that anatomy, in the comprehensive sense of the term, is grievously neglected amongst us, although anatomy, in that sense, so far from being what it is often called, namely, a "dry study," is one of the most fascinating as well as the most important departments of medical science.

MARESCHAL, the French court surgeon, early in the last century, performed, with entire success, the operation of opening an abscess in the liver of Leblanc, minister of war; on which occasion Morand, then a young man, was present. At the moment when Mareschal was about to insert the bistoury, Morand placed the top of his finger upon the tumour. Mareschal signed to him to remove the finger, which he did; but he immediately replaced it in the same situation, and, looking Mareschal hard in the face, pointed out to him in a tacit manner the direction in which the incision ought to be made. This kind of dumb-show was apparently not noticed by any other person present, and would probably have been wholly forgotten had not the minister, when quite recovered, given a feast, to which both Mareschal and Morand were invited. In the midst of their conviviality, Leblanc, taking Mareschal by the hand, said, addressing the rest of the company.—"This is the man to whom I owe my life!" "You are mistaken," replied Mareschal, "it is to that young man (pointing to Morand), but for whom I should have caused your death."

On the Structure, Economy, and Pathology of the Human Teeth, with careful Instructions for their Preservation and Culture, and concise Descriptions of the Best Modes of Surgical Treatment, &c. By WILLIAM LINTOTT, Surgeon, with numerous illustrations. London: J. Churchill. 12mo, pp. 114.

THAT benefits to medical science may result from directing special attention to particular diseases, is plainly shown in the improvements in the knowledge of those of the eye and the teeth. The divorce of some parts of medicine from its whole was indeed due originally, not to a view of the benefits which might flow from concentrating the mind on any one of those parts, but to the operations of self-interest developed in impudent quackery. Hence a blacksmith flourished as a "pure" eye doctor in the days of Cheselden, and in our own time hordes of contemptible fellows, with Anglo-Frenchified names, employ every device of imposture to dupe the multitude as—such is the slang term—*surgeon-dentists*. A better state of things is dependent on that portion of the press which is sensible of its necessity, and at once owns a duty to the public and to those intelligent men who devote their attention particularly to the teeth upon legitimate and commendable principles, placing their art on a sound and reputable foundation. The work before us is the production of a gentleman of this class, and contains within a small space much valuable information on the structure of the teeth, manifestly the result of considerable research, and illustrated by numerous engravings, describing, in their turn, the ivory, the enamel, and the recently-discovered substance that is analogous to the crusta petrosa in the teeth of brutes, namely, the cementum. Of this the author remarks:—

"The cementum forms a thin layer which invests the entire root of the tooth, from its neck to the extremity of its fang. On the neck it is extremely thin, and commences at the line of cessation of the enamel. It grows thicker as it proceeds onwards towards the extremity of the root. As age advances, a thin layer of cementum is also deposited upon the surface of the dental cavity. This deposit commences at the upper part of that cavity, and gradually increases with the years of the individual; in very old persons it so completely fills the dental cavity as to leave behind no rudiment of its previous existence. In the latter situation it is produced by the reflected layer of the periosteal

or investing membrane of the fang which lines the interior of the dental cavity, and constitutes the proper membrane of the pulp. When deposited in this situation, the cementum presses on the surface of the pulp, and gradually occasions atrophy of that structure. Or, according to some (an opinion with which I cannot concur), the entire pulp hardens by deposition into its texture, and becomes converted into this substance."

The following observations, relative to a defensive action set up within the teeth, are interesting in a physiological point of view:—

"The fact that the destructive effects of abrasion, or wearing down of the teeth, are in a measure obviated by a new deposition of bony matter within the dental cavity, has been noticed by several writers, by whom it has been observed, 'that it is first deposited in that part of the cavity towards the worn surface, which becomes gradually more and more filled as the tooth becomes abraded.' Also, that 'it is undoubtedly from the vessels of the internal membrane that this new bony matter is formed.'

"In the course of my examinations of teeth at different ages and in different conditions, I had frequently remarked, in those neither worn down nor abraded, a layer of bone of a darker hue than the adjoining tooth-bone, resembling precisely the bone deposited in abraded teeth, commencing above the apex of the dental cavity, and extending downwards, gradually diminishing until it became lost on the walls of the cavity.

"I could find no appearance of this layer in milk-teeth, nor in young permanent teeth; but in both incisives and molares, of the age of twenty to twenty-five, it is evident to the naked eye, and its extent increases in proportion to the age of the tooth.

"On subjecting a section of a canine tooth of medium age, which presented this appearance, to microscopic examination, I found the deposit to consist of a structure analogous to the cementum of the fang, the characterising cells, or corpuscules, being more numerous and differing only from the appearances presented by the *external* cementum in the peculiarity that the ramifications of the tubes issuing from the cells were finer and more diversified, some of them putting on an arborescent character.

"From these appearances I am led to conclude that this layer of *new bone* is secreted by a reflection of the periosteum of the fang over the inner walls of the dental cavity; and that its development, though probably accelerated by the wearing away of the original tooth-bone, nevertheless constitutes a part of the natural structure of the tooth, and though delayed till a late period, takes place independently of external causes, such as abrasion, decay, &c."

The development and growth of teeth form the subject of the second chapter, and the third is devoted to the ordinary diseases of the teeth and gums. Mr. Lintott's views, with regard to the production of decay, are novel, but consistent with the principles that have been developed by modern physiology:—

"My own opinion with regard to the formation of decay is founded upon the endosmotic phenomena which I suppose to be taking place in the structure of the tooth. Thus, as no blood-vessels are traceable into the texture of the ivory, I conceive that the animal part of this structure derives its nutrition from the colourless liquor sanguinis imbibed by the tubuli from the vessels of the pulp. This mode of nutrition is seen in various of the tissues of the body, as, for instance, in cartilage, in the cornea, &c. That the tissue of the tooth is imbued with fluid is evident from its solidity and colour; and also from its difference of weight in the fresh and dried state. This fact may be easily illustrated by immersing a dried tooth in water, when it is observed to absorb a considerable proportion of the water, and become materially changed in its density.

"Now I think that I am warranted in inferring that the nature of the fluid permeating the tooth from the vessels of the pulp is, in the normal state of the system, always similar.

"On the other hand, the crown of the tooth may be regarded as being immersed in the salivary fluid by which it is constantly surrounded, and, as we know, this fluid undergoes a change from alkaline to acid by simple exposure to the influence of atmospheric air within the mouth. Again, from containing a large proportion of nitrogen, the saliva is constantly subject to a change in character from decomposition; and, lastly, the fluids of the mouth are obviously very much affected by the state of the stomach, and disease of various kinds.

"Now, in the above statement we have the precise conditions which are best calculated to induce an active endosmosis; an alkaline fluid contained within the tubular texture of the tooth, an acid fluid externally, the two being separated by an animal tissue. To question the existence of endosmosis under such circumstances would be to dispute the first principles of physiological science. But what, asks my reader, are the results which I deduce from my positions? They are important, and the following:—In the first place, it is by this process that the colour of the teeth is altered in disease; that they become yellow and discoloured during illness by the transudation or endosmosis of discoloured and morbid fluids. And by the same process they are capable of regaining perfectly their original and wonted whiteness.

"Secondly, I regard this endosmosis as the means by which the calcareous matters are first dissolved, and secondly removed in a state of solution from the tubuli, leaving behind only the animal texture of the ivory, and thus establishing decay. I may be asked why, admitting my proposition, the decay should be localised to a single spot? Why should not all the tubes be affected similarly and simultaneously? My reply is, that the part most likely to be attacked, and that which under the above circumstances I believe to be affected, is one which is already placed in a morbid condition, either by imperfection of development or by injury to the tubular structure from pressure, &c.

"The first indication of the existence of decay of the ivory of the tooth is a slight discolouration, which is perceptible through the semi-transparent enamel.

"Decay progresses much more rapidly in some individuals than in others. The bone becomes softened by the removal of the earthy or calcareous part, leaving the organic or animal part behind, and is destroyed in a direct line from the surface towards the centre of the tooth, in the course of the tubuli. The base on which the enamel rested is thus removed, some accidental pressure in masticating bears upon the spot, the enamel breaks down, and a cavity is suddenly found to exist in what had probably, hitherto, been deemed, by the unsuspecting owner, to be a sound tooth."

A predisposing cause of decay, resulting from a slight interference in the development of the tooth, is thus explained:—

"It must have attracted the attention of every practical dentist that one situation in the tooth is remarkably subject to decay, I allude to the deep groove which exists upon the surface of the crown of the molares, and forms the line of separation between the tubercles. The first indications of decay are almost constantly perceived in this situation, and in the course of a groove which is frequently found on the outer side of the first molar of the lower jaw.

"In reasoning upon the probable cause of the frequency of decay in these situations I was at first led to infer that the diseased action must depend upon the collection of fluids and upon the decomposition of alimentary matter in these grooves. But I must confess that this explanation, although undoubtedly partly applicable to the morbid process, was far from satisfactory when I reflected that the decay occurred as frequently in the teeth of the upper as of the lower jaw; that it affected several teeth simultaneously; and was not unfrequently absent in the lower while it was present in the upper teeth.

"Finding, from repeated observation, that in teeth affected in the manner above described the structure of the enamel was unnaturally brittle, and that the disease followed very accurately the line of the depressions on the crown, I was led to the opinion that the extreme susceptibility to diseased action must depend upon defective formation in this part of the tooth, and further investigation has served to convince me that this is really the case.

"The mode of formation and growth of the tooth described by Mr. Goodsir throws considerable light on this point, and affords an explanation of the phenomenon which, to my mind, is perfectly satisfactory.

"By referring to Mr. Goodsir's explanation of the production of the form of the upper surface of the crown of the tooth, it will be seen that this depends upon the development of a number of opercular processes corresponding with the number of the tubercles of the tooth. These opercula meet at a line corresponding with the future groove upon the crown, and at this point become joined and continuous with each other, so as to constitute a single membrane, by the vessels of which the enamel fibres are secreted. Now, if we suppose these opercula, in consequence of interference in development, to approximate only partially and imperfectly, or to unite and form a cicatrix, insufficiently supplied with blood-vessels, the natural consequence must be an improperly formed enamel, and one susceptible of falling an easy prey to the chemical influence of the decomposing fluids lying in contact with it and imbibed into its texture.

"Such, in my opinion, is the real cause of decay so constantly happening in the situation referred to,—a morbid process, which, it will be observed, differs from the ordinary course of disease by commencing in the enamel and thence extending to the ivory, and not, as is usually the case, affecting first the ivory and secondarily involving the enamel."

There are other passages that we could advantageously submit to notice in our columns, but shall quote further only one, and that on the subject of a common exciting cause of decay, which is ably explained now, we believe, for the first time. The theory is founded on the peculiarity of structure of the ivory:—

"Many cases which have fallen under my observation have strongly influenced me in the *supposition* that the mutual pressure exercised by the angle of one tooth upon another may, when carried to any extent, become an immediate excitant of decay. The infrequency of a decayed state of the incisors of the lower jaw, which are often pressed into very close contact, will perhaps be adduced as an argument against this idea; but it must be remembered that in such cases the pressure of the teeth is general and

equal over the whole of the lateral surface, and, consequently, that the transudation of the fluids within the ivory is no more materially affected by it than is that of a limb which has been carefully and equally bandaged from one extremity to the other. But, in the case of severe and continuous pressure of one point upon another, I conceive that the nutritive function of the tubes may be interfered with and prevented, so that the action necessary to the vitality of the ivory being interrupted, death of so much of it as comes within the influence of the pressure ensues, and diseased action is set up in the remaining portion; thus decay is engendered, and the mischief proceeds until the enamel, no longer strong enough to resist, gives way, and a cavity is found in either tooth, exactly beneath the spot where the chief point of contact existed. Or it may be an endeavour on the part of nature to avoid the pressure by establishing a new process, viz., absorption or removal of the calcareous matter of the part pressed upon, consequent softening, subsequent breaking down of enamel, and successive continuation of the malady.

"Be this as it may, I have no doubt that *unequal lateral pressure* is amongst the principal of the exciting causes of decay, and is another reason for early and proper attention to the teeth. The inorganic nature and consequent insusceptibility of the enamel, are quite sufficient to upset the popular belief that decay is, or can be, communicated from one tooth to another. How, then, are we to account for the decay that is so constantly found to exist between two teeth in such close contact that a lodgment of food cannot have been the cause, unless we allow that an undue degree of pressure has produced it? If its origin be spontaneous, why should it not as frequently appear upon either face of the tooth?"

The remaining chapters relate to "remedies against decay;" "diseases of the gums and alveolar processes;" "irregularity of the teeth," and the methods to be adopted for ensuring their proper position; for extraction; and for "restoration of the teeth," all treated with an openness and candour which does credit to the writer, without concealment of the means by which the dentist effects his objects, so that both students and practitioners may rise from its perusal gratified and instructed.

Dr. Papavoin found that of 532 female children examined at the Hôpital des Enfans Malades, Paris, 338, or about two-thirds, had tubercles in the lungs, &c.; while of 387 males, tubercles were found in only 210, or little more than half the number.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 13, 1843.

Edward Stanley, F.R.S., President.

The first paper read was one from Dr. Hodgkin, which related to the

CHARACTERS AND STRUCTURAL PECULIARITIES OF MORBID GROWTHS,

in which cancerous affections were included. It was in continuation of a subject which had already been brought before the society in a former paper by the same author.

After describing the different appearances revealed by the improved microscopes of the present day, the author endeavoured to connect the nucleated cells which Müller has shown to exist in these structures, with the production of those compound cysts which were described in the former paper, and pointed out as affording the type of the adventitious structures referred to. The following are the conclusions which the author is desirous of drawing from the observations contained in the paper:—

First. The unrestricted confirmation of the views contained in the former paper as to the existence of the type of compound serous cysts in the adventitious structures referred to. The author had not only found it in man but in several of the inferior species of mammalia, and in birds. Several able observers had, on examination, coincided with his views, and he mentioned the late Professor Delpech and the present Professor Rokitanski having personally informed him of their having independently been induced to adopt his views.

Secondly. That the microscopic examination of the tissues, though extremely interesting, does not furnish perfectly conclusive tests of any particular form of adventitious structure to which a specimen may belong, but that it demonstrates the application of the nucleated cell theory, whilst it is fatal to that of cancerous matter being formed in the blood and eliminated at the spots at which the tumours become manifest; it therefore furnishes an important argument in favour of operation, though other practical considerations require to be attended to before operation is decided on.

Third. That to have a complete view of these structures we must combine the cell theory of Schwann and Müller, the coagulation principle which the author had previously suggested, and the process of organisation investigated by Kiernan,—three stages of development which appear to occur in the order just enumerated, and that none of the phenomena taken singly is an adequate test of malignancy, which, as stated in his first paper, must be regarded as the sum of several characters.

Fourth. That in operating for the removal of a tumour of this class, it is extremely im-

portant to leave behind none of those minute cysts which often form granules in the surrounding cellular membrane, though it may appear to be, in other respects, perfectly healthy; this appears to be a mode of extension of the disease independent of inflammation.

Fifth. That experience teaches us that the infiltrated form of these diseases occurs in the structures in the neighbourhood of the purely adventitious growth, when these structures have been the seat of inflammation, and that the chances of success from operation are consequently infinitely diminished when such surrounding inflammation has taken place.

The presence of the peculiar matter of the disease in the interior of vessels appears to be one of the modes in which infiltration, the result of inflammation, exhibits itself; it is therefore not a valid argument in favour of the pre-existence of such matter in the circulating blood.

On the Nature of the Ossification of Encysted Tumours. By JOHN DALRYMPLE, Esq., Assistant-surgeon to the London Ophthalmic Hospital.

The author removed from the upper eyelid of a patient an encysted tumour, about the size of a pea, which was found to consist of concentric layers of hard earthy material. Upon examining the structure by the microscope, he found that the layers were composed of epithelium scales closely agglutinated together, but instead of the usual transparent and thin laminæ, with its central nucleus, they were thickened and hard, and contained granular earthy molecules, which could be removed by immersion in weak muriatic acid. No earthy amorphous deposit existed around or among the scales, which were opake, of a light brown colour, with a clear and large central nucleus. Having added some observations on the microscopic appearances of other encysted tumours, the author concluded by noticing, shortly, the differences between the origin of proper ossific growths, and that of the tumour described by him.

On the Varieties, Causes, Pathology, and Treatment of the Inflammatory Affections of the Retina. By E. O. HOCKEN, M.D.

After some general remarks on the frequency of retinitis occurring as a secondary affection, consequent on other diseased conditions of the eye, the author drew attention to three tables, which showed the relative numbers of cases of idiopathic inflammation of the retina, met with in three large eye infirmaries during several years. According to the records of the West of England Eye Infirmary, there were twenty cases of retinitis in three thousand nine hundred and twenty-six patients, admitted for various ophthalmic diseases during four years; of these six were acute, nine chronic, and five not specified. Combining with these the results of the Glasgow Eye Infirmary and the London Ophthalmic Hospital tables, the author found that acute retinitis only occurred once in every one thousand seven hundred and fifty-five cases of other diseases of the eye, and this corresponded with his own experience; that the proportion of subacute cases was one in every five hundred, and that of chronic cases one in three hundred and thirty.

He then proceeded, in accordance with the title of his paper, to make observations on the pathology and treatment of the different forms of retinitis, and illustrated his views with the details of some cases.

On the Presence of Spermatozoa in the Fluid of Common Hydrocele. By E. A. LLOYD, Esq., Assistant-surgeon to St. Bartholomew's Hospital, and Surgeon to Christ's Hospital.

The object of the author was to announce the fact, that in two cases of common hydrocele, in which he examined the fluid withdrawn by tapping by the microscope, he found numerous spermatozoa. The first case occurred in the early part of last winter. Subsequently to that, in the course of a few weeks, he examined the fluid in four other cases, but without finding any animalcules in it. Three months ago the second case occurred. The patient was sixty-three years of age, and had been operated on previously for hydrocele about fifteen times. Sixteen ounces of a greenish-yellow fluid, so albuminous as to be quite adhesive, were drawn off. The author counted forty of these microscopical beings in one drop of this fluid. Some of the animalcules had retained their power of motion for three hours after the fluid had been withdrawn. Blood-globules, transparent cysts, and small granular bodies, also portions of epithelium, or, what much resembled it, were likewise found in the fluid. In several other cases of hydrocele he had found no spermatozoa in the fluid.

Mr. PARTRIDGE asked whether the writer had mentioned the probability of the testis having been punctured.

Mr. ERASMUS WILSON observed that some strength was given to Mr. Partridge's suggestion by the circumstance of blood particles having been observed in the fluid. Such an explanation would, without much speculation, be an intelligible solution of the phenomenon in question.

DIATHESIS should be considered as peculiar states either of the solids or of the fluids, but above all of the *blood*, constituting a kind of vitiated nutrition, either obscure and latent, or exhibiting perceptible effects in the economy.—*Amadon.*

IDENTITY OF SMALL-POX AND COW-POX.

To the Editor.—Sir: In the two last numbers of THE LANCET I observe reports of cases of small-pox occurring simultaneously with the vaccine disease. Some fifteen years since my attention was strongly excited by the occurrence of a similar case, which terminated fatally, in my own practice. Since then I have met with several cases of what is usually called *modified* small-pox, running its course concurrently with the vaccine disease, and from which the patients completely recovered. Now, I think it important to inquire whether in these cases the small-pox, be it severe or modified, is not attributable to the operation of vaccination. If I understand the gentlemen who have reported these cases, the two diseases (if such they really be) are to be considered merely coincident with, and not dependent upon, a common cause. I submit, however, whether it would not be more correct to regard the small-pox, or, rather, the compound disease, as having been originated by the vaccination, and if such be the case, it adds weight to Jenner's opinion, confirmed, as it is, by Mr. Ceeley's experiments, that the two are incidental diseases. I am, Sir, your very obedient servant,

JOHN WALKER.

Manchester, June 20, 1843.

LEMON-JUICE IN DROPSY.

Dr. SCHWABE, of Gross-Rudestedt, reports the case of a man, seventy-five years of age, the subject of dropsy, to whom, as if in the last extremity, he was hastily called. For several weeks the patient had been able to maintain only a sitting position, his hands and feet were enormously swollen; there was extensive fluctuation all over the abdomen, and the scrotum was so tumefied that the penis was scarcely perceptible. The pulse was feeble and intermittent. Dr. Schwabe at first prescribed acetic ether, which he afterwards combined with lemon-juice, ordering a tablespoonful of the latter freshly expressed, every two hours. All kinds of fluid, besides, were rigidly prohibited, the food consisting of three ounces of (white) meat, and as much bread, three times a-day. On the second day after the adoption of these means, abundant diuresis ensued, with a diminution of the pains previously felt in the chest. The dose of lemon-juice was increased to half as much more. The urinary secretion now became so abundant that six quarts of urine were passed in twenty-four hours. From this time the patient was able to lie in bed, and he slept well for several hours. The pulse rose, and ceased to be intermittent; the swellings of the abdomen and extremities gradually decreased. The strength of the patient became renovated; digestion improved; the stools were solid and duly coloured; and towards the end of the treatment indicated which continued for three weeks, the quantity of urine daily passed had decreased to its natural quantity. Less doses of lemon-juice were now adopted; and by the thirtieth day of the treatment all the symptoms of dropsy, even the œdema, had vanished. In two months the patient had become enabled to resume his daily occupations.—*Casper's Wochenschrift.*

Dr. Drechsler, of Köthen, relates cases of a similar nature. A man, fifty-five years of age, suffered an attack of ascites with hydrothorax; dry cough, diminished urine, abdominal fluctuation, œdema of the legs, &c., were attended by a continual prospect of suffocation. Quinine, digitalis, squill, bryony, nitre, antimony, belladonna, &c., had been tried without success. A tablespoonful of lemon-juice was now given three times a-day, which daily quantity was afterwards increased to six spoonfuls. This amount was taken for ten successive days; the doses were then diminished. In all, the patient had taken about three pints and a half of juice, by the aid of which he was entirely cured; at any rate, two years afterwards he remained one of the most active and best workmen of his class. No particular change of diet is mentioned; but Dr. Drechsler made his patient drink a glass of sugared water after every dose. Another case is that of a strong constitutioned man, twenty-eight years of age, similarly cured in Dr. Drechsler's practice, after the failure of other means.—*Medicinische Zeitung.*

It will be recollected that this subject was alluded to in the last vol. of THE LANCET. The action of lemon-juice on the kidneys is unequivocal. It is said that if its employment be persisted in for a sufficient length of time, urine inevitably ceases to be albuminous.

POISONING BY HEMLOCK AND BY CHERRY-LAUREL.

A CASE occurred lately in France in which hemlock eaten in a salad had made a number of persons ill, though the cook had, on a previous occasion, some days before, plucked a quantity of leaves from the identical plant of hemlock, mistaking it for chervil, and which, having been used in soup, were eaten without injury. In truth, hemlock is productive of no ill effect in soup, as its medicinal principle, conine, is volatile, and consequently dispelled by boiling. In 1809, when the French troops bivouacked before Madrid, a soldier cut down several branches of cherry-laurel for spits on which to roast meat. The bark having been unluckily stripped off, the juices of the wood penetrated the meat, and of twelve soldiers who ate of the latter, seven died.

NEWS OF THE WEEK.

MR. COTTON, an artist, of Lower Lisson-street, New-road, is anxious that we should make mention, as "a remedy for *toothach*, which he has found successful for nearly ten years, the *pellitory of Spain*, a root, of which a bit is to be broken off, about the size of a horse-bean, and placed in the mouth, the spittle not to be swallowed. It not only stops the pain, but preserves the teeth."

A CORRESPONDENT complains that "notwithstanding the statement in the report of the British Medical Association, page 240, where it is said that the poor-law commissioners are resolved that any appointment that is not in strict accordance with the issued regulations for unions would be null and void, at the last election of medical officer for a district in the Malmsbury union, where there were three candidates, two of whom were eligible and the other not, the board of guardians appointed the candidate who had not received the licence of the Apothecaries' Company, for the reason that he was holding the situation at the time."

A DURHAM PRACTITIONER complains strongly against the examiners of the London College of Surgeons for granting diplomas to almost any applicants, whether good anatomists or bad. He very truly adds—but the complaint is as old as the College, and has been made scores of times before—that "Such concessions become a hardship on those members who have successfully struggled to attain a knowledge of anatomy and surgery, by placing them on a par with those who have publicly boasted that a knowledge of anatomy was a farce, that they had not studied it for upwards of twenty years, and that yet they would obtain the College diploma without ever studying at all. These facts," he continues, "becoming known to the public, of what value is the diploma? No wonder that there should be, throughout the kingdom, a perfect indifference on the part of the community whether a person possesses any qualification or not, or the medical practitioner employed is a quack or a legally-qualified surgeon."

THE second anniversary of an association for sending medical men to Syria was held at the Music Hall, Store-street, Tottenham-court-road, on the 20th inst., Lord Ashley in the chair. A report of its recent proceedings was read by the secretary, the Rev. Dr. Colls, and adopted on being moved and seconded by Sirs Henry Halford and James Clark. A dispensary was established at Beyrout in 1841, and the country being entirely destitute of good medical practitioners, the association conveys Protestant surgeons there with the double hope of "comforting the sick and pioneering the way for the religion of Christ." The first medical emigrant was a Dr. Kernes, of Westport, in Ireland. The association advertise for subscriptions to promote its objects. About £400 are asked for in order to erect a hospital at Beyrout. Dr. Kernes had received and attended to 1440 applications for medical aid. The last year's fund of the society amounted to £752, and the expenditure to £495.

"THE ART OF LIVING." A little work with this title has just been published by Messrs. Longman. It is from the pen of an American physician, and is occupied with a discussion of "five principles," namely (to give them the interpretation of our own words),—1. That happiness can be enjoyed only by those whose minds and bodies are equally well regulated and healthy.—2. That without labour, either of the mind or the body, there is no enjoyment for man.—3. As friction and straining will wear out machines, so labour will wear out the body too fast if relaxation of both mind and body is not permitted.—4. That the surest foundations of happiness are gardening and the pursuit of natural history.—5. That a happy home is of all places the most pregnant with "satisfaction, interest, and happiness." The twelve dozen pages of which the work consists are occupied, in very agreeable language, dictated by a very amiable mind, with a development of the five principles upon which the physician-author considers human happiness wholly to depend. The "principles," however, are common-place enough.

THE last number of the *Nottingham Journal* contains a notice of the death of Dr. J. M. Davidson, of that town, and, considering his reputation as a physician to stand very high, adds a brief memoir of his life. A rupture of a pulmonary vessel occurred to him while making morning calls in his carriage. He was taken into a neighbouring shop, where he asked for a basin, into which he threw up blood, exclaiming, "I must die; lay me down, I must die;" and after gasping twice, expired. He was forty-seven years of age, and had been suffering from disease of the lungs during the last four months. He was born in the Vale of Llangollen, of Scottish parents, and educated at Inverness, Edinburgh, and Guy's Hospital. In 1819 he commenced practice in the Staffordshire Potteries, and after he had been strongly urged in vain to stay, two gentlemen now living in Hanley offered to settle a handsome sum upon him if he would remain; but he declined their offer, and assigned as his principal reason that they had no hospital (the North Staffordshire Infirmary has since been built) there in which he could act. In 1824 he settled at Nottingham, where he was, in 1827, elected physician to the General Hospital. The writer in the

journal pays him many high compliments for his "affection for the poor" and the "Christian excellences with which his walk and conversation were adorned," and concludes with advising "his sorrowing relatives and friends ever to remember that the best tribute they can pay to his memory will consist in following him as he followed Christ." We believe that some cynical persons in the county did him the injustice of thinking that he was "a little bit of a humbug."

THE Statistical Society of London held its final meeting for the season on Monday evening last, when a paper was read by Dr. Guy on the relative prevalence of phthisis as compared with other diseases in different classes of the population, the results of which were drawn from a comparison of several thousand cases occurring in the out-practice of King's College Hospital. The paper was directed to showing that in-door occupations evidently predisposed persons to become consumptive, while out-door employment had as decided a tendency to ward off the evil. Heat or moisture, according to the researches of Dr. Guy, did not appear to exert any material influence on the prevalence of the disease; but the inhalation of dust was named as a fertile source of its occurrence, and in masons, sawyers, and others who were incessantly subject to such an inconvenience (putting out of the question cutlers, dry-grinders, &c., a class that is proverbially obnoxious to its influence), two cases of disease in every five were cases of tubercular phthisis.

COLONEL VYSE, of Stoke, has just offered a medical man £100 a-year to reside in his parish and take care of the sick poor, so ill cared for does he suppose the poor in the Eton Union to be by the legally-constituted authorities of the district; yet Eton is placed in the close neighbourhood of a palace! His benevolent proceeding—may his choice be soundly made—displays a remarkable example of charity and humanity to the wealthy aristocracy of England.

DR. FRAMPTON has just made public a new and elegant method of testing the presence of corrosive sublimate, grounded on the known affinity of silver for mercury. He added a grain of bichloride of mercury to four ounces of tea with sugar and milk; then boiled this mixture with salver-dust, and poured off the supernatant fluid. The residue was boiled with liquor potassa for the removal of organic matters; and liquor ammoniæ was next added to dissolve the chloride of silver formed. The sediment was now washed and dried, and on placing it in the bulb of a tube and applying heat, a ring of globules of metallic mercury collected around the neck of the tube. Dr. Frampton procured similar results by operating in the same manner on mixtures of the bichloride with a solution of gelatine, and with sanguinolent serum from a hydrocephalic subject; but in these cases muriatic acid was employed to acidulate the mixture before the addition of the silver. The silver should for convenience be moistened with a little distilled water before being added to the mixture.

To illustrate how far the French government has set its face against quackery, we may instance the recent case of a druggist in Paris who, having puffed off two productions which he had on sale, one called *Melasse de Cochinchina*, and the other *Ervolenta de l'Afrique*, was summoned before the departmental tribunal. M. Chevallier, indeed, ascertained that neither preparation was injurious, the first being in no wise different from ordinary molasses (though the druggist charged a shilling for what could have been procured at any grocer's for two pence); and the second, the ervolenta, which had been vaunted as possessing a valuable aperient quality, being exactly similar to ground lentils. But the tribunal assented to the triple charge of deceit in the articles sold, illegal practice of pharmacy, and the sale of secret remedies; and, further, refused the druggist his costs.

THE annual mean temperature in London is 50°39; at Edinburgh, 47°31; and at Dublin, 49°10. At Paris it is 51°; at Rome, 60°70; and at Naples 1°40.

DEPRAVATION OF THE SENSES.—An insane female patient who lately entered the Salpetrière in Paris, suffered illusions in four out of the five senses, viz,, hearing, sight, smell, and taste. We refer readers to the case in the "Gazette des Hôpitaux" of June 3rd.

DR. STOKES considers *pectoriloquy* as the least important and most fallacious of all the stethoscopic signs of phthisis.

ROYAL COLLEGE OF SURGEONS IN LONDON.

LIST of gentlemen admitted members on Friday, June 16, 1843:—John Baxter Langley, Edmund Bullock, John Hooper, Patrick McIntyre, Edward Harrison Linnecar, Henry Nathan, Samuel Milnes Marshall, George Royde, Thomas Leaman Henley, John Warwick, John Duke, Abraham Kidd.

BOOKS RECEIVED.

Essays on Surgical Pathology and Practice. By Alexander Watson, M.D., Consulting-Surgeon to the Royal Infirmary of Edinburgh. Part I., on Abdominal Herniæ. Plates, pp. 38.—Part II., on Injuries and Diseases of Arteries. Plates, pp. 32. Edinburgh: Maclachlan and Stewart, 1843, 4to.

An Inaugural Lecture on Botany, considered as a Science and as a Branch of Medical Education. By Edward Forbes, Professor of Botany in King's College. London: J. Van Voorst, 1843. Pp. 23.

A Concise Historical Sketch of the Progress of Pharmacy in Great Britain, intended as an introduction to the Pharmaceutical Journal. By Jacob Bell. London: J. Churchill, 1843. 8vo, pp. 108.

Contributions to the History and Diagnosis of Croup. By John Ware, M.D., 8vo, pp. 18.

A Lecture on Quack Medicines delivered to the Wakefield Mechanics' Institution, Feb. 20, 1843. By T. G. Wright, M.D. London: R. Groombridge, 1843. 8vo, pp. 44.

A Treatise on Food and Diet, with observations on the Dietetical Regimen suited for Disordered States of the Digestive Organs, and an account of the Dietaries of some of the principal Metropolitan and other Establishments for Paupers, Lunatics, Criminals, Children, the Sick, &c. By Jonathan Pereira, M.D., &c. London: Longman and Co., 1843. 8vo, pp. 542.

The Art of Living. By Dr. Henry Duhring. London: Longman and Co., 1843. Pp. 144.

CORRESPONDENTS.

A correspondent (*G. P.*), referring to the questions put some time since by an inquirer relating to the treatment of *vaginal discharges in children*, says, the class of cases alluded to by "C." are very frequent, and arise far oftener from a debilitated or cachectic state in pale and delicate children than from any other condition. Hence they are common in dispensary or hospital practice, where bad feeding and neglect of cleanliness are additional and powerful promoters of the affection. The discharge not only has the appearance of every shade of altered mucus, from that of health to that of gonorrhœa or gleet, but it is frequently mixed to a great extent with blood, of which, in one case, I saw it entirely constituted, in a child affected with purpura, and which afterwards assumed the ordinary yellow appearance. Complicated with it we often find great pain and difficulty of voiding urine. I do not think the complaint is by any means generally obstinate if restoring the propriety of tone to the system be borne in mind. The employment of mild aperients and alteratives in the first instance, and, subsequently, quinine, or some mild preparation of iron (of the two, I much prefer the former), have usually, in a short time, had the desired effect. In the early stages the application of lotio plumbi diacet. to the external genitals will remove the irritation, tumefaction, and redness. If a gleety discharge, after a little time, still continue, an injection composed of decoction of oak-bark with alum, is the safest and most efficacious remedy.

A correspondent inquires whether the medical officer of an union should be allowed avowedly to treat the sick poor in his district on homœopathic principles. We reply that evidence of the pretence to relieve them as a disciple of Hahnemann, should become ground for the immediate removal of such a person from office. The attempt to cure by homœopathy must surely be an excuse for saving the expenditure on medicine.

To the Editor.—Sir: For the information of your Wandsworth correspondent I beg to state that the new therapeutic agent for phthisis is known by chemists under the name of *pyro-acetic spirit*, but in the commercial world is called *naphtha*. It can be procured at Mr. Bell's, Oxford-street, or at Messrs. Cox and Co.'s, Bread-street-hill, Lower Thames-street. I am, Sir, your obedient servant,

JOHN HASTINGS, M.D.

Albemarle-street, June 20, 1843.

To the Editor.—Sir: Allow me to state, through the medium of THE LANCET, that I keep naphtha possessing the properties required by one of your readers (page 424), viz., miscibility in water without producing a cloud, and of the specific gravity of .842. I have the honour to remain, Sir, your obedient servant,

LLOYD BULLOCK.

Conduit-street, June 20, 1843.

F. C.—Coroners are required by law to hold inquests on the bodies of all persons who have been found dead, although the death may not have been attended by "suspicious circumstances."

D. P. would raise a laugh at the expense of his own fulmination, for the proceeding is, like some other private matters, one that the public press could not reach.

A Subscriber (University College).—A member of the college could do so in what are called surgical cases; but in whatever form he made the charges, he could not act as an apothecary, in what are termed medical cases, without being liable to prosecution for the penalties.

A. B.—Never, we believe. By "the circulation" we suppose our correspondent means the *manner* of the circulation.

The communication of *Mr. J. W.* (of M.) was noticed in THE LANCET when it appeared in print last year, and all that was proper to be extracted was then quoted from it. The document, as a whole, is purely an advertisement, and if inserted would only entail upon us the discredit of inconsistency whenever we refused to find room for a similar paper from other quarters.